FROM CLASSROOM TO CAREER:

BUILDING OKLAHOMA'S BRIDGE TO WORK

An **Oklahoma Competes** assessment on access and quality in effective pathways in high school career and technology education.

September 2026

INSIGHTFUL

STATE CHAMBER RESEARCH FOUNDATION

From Classroom to Career: Building Oklahoma's Bridge to Work

An Oklahoma Competes assessment on access and quality in effective pathways in high school career and technology education.

This report examines participation and completion, connections to jobs and wages, credentials, and employer partnerships. It identifies actions to improve access and make program results more useful to students, families, employers, and state leaders.

Prepared by Insightful Education Solutions

September 2026

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Executive summary

Why this study

Oklahoma has made career and technical education a central part of its plan to give employers the workers they need and to give high school students a route into further training and work. The state offers high school CTE through school districts and 29 technology center districts. In 2024–25, it reported a headcount of more than 108,000 across CTE pathways and more than 20,000 pathway completions. Families, employers, and state leaders have had limited evidence on whether these pathways prepare students for occupations employers are hiring for, at wages that can support a household. This study examines that connection and three indicators of pathway quality: program completion, industry-recognized credentials, and experience in a real workplace.

The Oklahoma State Chamber Research Foundation partnered with Insightful Education Solutions to address those questions. A 14-member advisory board of state leaders, employers, and district and technology center leaders set the definition the study measures against. Between January and October 2026, the study analyzed three school years of CareerTech student activity data, 2022–23 through 2024–25, from 342 school districts and all 29 technology centers. It examined occupational demand and wages in the six priority sectors the State Chamber named. It gathered the views of employers, educators, administrators, and students through a survey with 62 responses and interviews and focus groups with 78 participants.

> An **effective pathway** is a sequenced, employer-aligned program of study that connects students to real industry experiences, equips them with credentialed skills, and prepares them for meaningful careers through sustained partnerships with employers. -- Advisory Board definition

The evidence suggests that Oklahoma's high school CTE system performs well in areas school districts and technology centers can manage directly, and less well in areas that require decisions or support from the state and employers. Reported completions grew 14.8 percent over three years, and credentials earned grew 32.7 percent, while reported advanced work-based learning fell 27.8 percent. The largest gaps involve providing seats in sought-after programs, arranging workplace placements, confirming which credentials employers value, agreeing on the occupations pathways should prepare students for, and verifying where graduates go. Addressing these gaps requires coordinated action beyond individual schools and technology centers.

To interpret these findings, a c**oncentration** means enrollment in three or more credits in one pathway, while a **completion** means finishing all required courses. Counts are recorded by pathway, so they are not counts of unique students. **Completion ratios** compare the reported totals; they do not track individual students from entry to completion.

Principal findings

Oklahoma's high school CTE programs follow different models in school districts and technology centers, but statewide totals combine them. Technology centers accounted for 91.1 percent of reported concentrations and 97.6 percent of reported completions in 2024–25.

The ratio of reported completions to concentrations was 93.4 percent at technology centers and 23.3 percent in school district programs. The difference remains even when the analysis allows for counts withheld to protect student privacy. Completion ratios are similar across the 29 centers. Educators describe center programs as planned sequences of courses and most district CTE as single electives. Separate reporting would help readers understand the results in each setting.

About 40 percent of high school CTE concentrations are in pathways aligned to occupations in the Chamber's priority sectors that do not require a four-year degree. Here, alignment means that a pathway meets the study's criteria for connections to priority-sector occupations, job openings, and wages. Including occupations that require a degree raises the share to 54 percent. These shares have remained within two percentage points over three years while concentrations grew 10 percent. Alignment to a priority sector does not necessarily mean that most available jobs pay well. Therapeutic Services, the largest aligned pathway, prepares students mainly for occupations paying below the study's sustainable-wage threshold of $21.18 an hour. Some pathways outside the six sectors, including Construction and Automotive Service, prepare students for occupations paying above it. Energy and Transportation and Logistics have the fewest concentrations relative to their well-paid job openings.

High school students' access to workplace learning depends heavily on individual relationships between educators and employers. Advanced work-based learning fell 27.8 percent over three years, from 1,771 experiences to 1,279, while completions and credentials increased. Placements depend on requirements set by accrediting bodies, teachers' contacts, and employers' willingness to host students under 18. Employers are often consulted after programs are designed and are rarely asked which credentials matter for hiring. Thirty-five percent of employers surveyed had never been asked to host a student. Employers described a need for an intermediary: an organization that connects employers with schools and technology centers and coordinates their partnerships. About nine in ten employers answering the survey question expressed interest in such an organization.

Limited space and practical barriers restrict high school students' access to technology center programs. Eighty-four percent of educators surveyed disagreed that there are always enough seats, and educators reported demand exceeding seats in construction, welding, health science, and criminal justice. Transportation, scheduling, instructor recruitment, and employer age limits also affect which programs and placements students can access. Across student groups, reported data show larger differences in participation in a sequence of courses than in completion ratios.

Oklahoma needs clearer expectations for high school CTE pathways and more accessible, reliable information on their results. The share of concentrations aligned to priority-sector occupations rises from 40 to 54 percent when occupations requiring a degree are included. Using the State Chamber's sectors or the state's Critical Occupations list also produces different assessments for 21 of the 46 pathways with reported enrollment. The credential list combines qualifications with different purposes, from safety cards to occupational certifications, and 242 of the 425 promoted credentials had fewer than ten earners in 2024–25. Employers surveyed placed greater importance on continued progress toward a postsecondary credential than on certification before entering the workforce. Information on graduates' education and employment comes from instructor follow-up rather than matched records. Eighty-seven percent of educators surveyed said reliable destination data are difficult to obtain, and a third of employers surveyed did not know public CTE data exist.

The three research questions in brief

Student outcomes and pathway quality. What do participation, completion, credentials, and workplace experiences show about high school CTE? Technology centers report nearly as many completions as concentrations, while school districts report substantially fewer completions relative to concentrations. Credential attainment is rising, but the state's list combines qualifications with different purposes and many have few earners. Advanced work-based learning is declining, and participants describe no consistent statewide process for connecting students and employers.

Workforce alignment. Do high school CTE pathways prepare students for well-paid occupations in Oklahoma's priority sectors? About 40 percent of concentrations are in pathways that meet the study's alignment criteria for priority-sector occupations open without a four-year degree. Fifty-two well-paid occupations in those sectors, also open without a four-year degree, have no CTE pathway preparing students for them, although not all are suitable for high school training. The assessment of which pathways are aligned also changes depending on whether the State Chamber's sectors or the state's Critical Occupations list defines the priorities.

Employer engagement. How do employers help shape pathways and provide workplace experiences? Employers participate in tours, talks, and curriculum consultation, but they describe less involvement in program design and advanced placements. They also report difficulty finding a consistent point of contact. Employers described the missing piece as an organization that helps them and CTE providers build and sustain partnerships.

Recommendations

1. Establish clearer expectations for high school CTE pathways and make their results accessible. Distinguish career exploration, preparation for employment, and preparation for further education. Agree on priority industries and occupations and a sustainable-wage threshold. Report school district and technology center results separately, verify graduates' education and employment, and make pathway information and outcomes accessible to students, families, and employers.

2. Establish an intermediary to connect employers and CTE providers. A statewide coordinating organization with regional partners should give employers a clear contact point, involve them in program design and credential review, help arrange placements, and maintain relationships when personnel change. Assess whether an existing organization or partnership can perform this role before creating a new one.

3. Review credentials with employers and cover exam fees for the credentials they validate. Build on the tiered list CareerTech is developing to better communicate which credentials matter most for employers. Separate basic safety and employability credentials from occupational certifications.

4. Expand access to advanced work-based learning. Set clear expectations for each program and provide transportation and scheduling support. Support paid placements that earn course credit where feasible, and give employers one authoritative explanation of the rules that apply when they host students.

5. Expand programs where demand and evidence support it. Use employer demand, wages, entry requirements, and student outcomes to identify where more capacity is needed. Match each investment to the local constraint, whether that means adding seats, recruiting instructors, improving facilities or transportation, or changing who has authority to make program decisions.

1 Oklahoma CTE and the study scope

1.1 Two settings with different roles

Oklahoma offers high school CTE through school districts and 29 independent technology center districts. The student activity data used in this study cover 342 school districts and all 29 technology centers. The Oklahoma Department of Career and Technology Education, known as CareerTech, supplied the data.

School district courses can introduce students to a field within a general high school schedule. Technology center programs provide a sequenced program of occupational study that students travel to attend. Both roles have value, and each needs to be judged against its purpose rather than through a combined statewide total.

Technology center service areas are assembled from whole or partial school districts and cross county and workforce-region lines. The 29 centers serve 74 of Oklahoma's 77 counties; 33 counties fall within the service area of two or more centers, and Cimarron, Texas, and Marshall counties fall outside every center. Where students live, whether transportation is available, and how schedules fit together shape which programs they can reach. Maps appear in Appendix C.

> *"Transportation is a very real challenge for students. It would be nice to have all of the programs spread across the campuses. We're limited in what we can choose because of transportation."*
>
> **— Student, Cybersecurity Pathway**

1.2 What the study examined

The study asks whether Oklahoma's high school CTE pathways prepare students for occupations that employers need and that pay a sustainable wage. It also examines three indicators of quality: completion, industry-recognized credentials, and advanced work-based learning. The advisory board defined an effective pathway as "a sequenced, employer-aligned program of study that connects students to real industry experiences, equips them with credentialed skills, and prepares them for meaningful careers through sustained partnerships with employers." To assess these elements, the study examines participation and completion, connections to priority-sector occupations, credentials, workplace experiences, post-graduation transitions, and employer engagement. Responsibility for the analysis and recommendations rests with Insightful Education Solutions and the Oklahoma State Chamber Research Foundation. The three research questions and the indicators used for each appear in Appendix D.

> *"For me, a pathway's been effective when a new hire comes in not only with the required 'book smarts' but they can also demonstrate for us with their hands. It's not just theory to them. They get it and they can show us they get it."*
>
> **— Employer, Aerospace and Defense Sector**

Student activity covers school years 2022–23 through 2024–25. Occupational demand comes from Lightcast's third-quarter 2026 data release and measures average annual openings projected over 2024–2029, which combine growth and replacement needs.[1] The labor market analysis covers the

[1] Lightcast occupation tables, Q3 2026 data set, QCEW Employees class of worker, 2024 base-year employment with 2024–2029 projections.

state, six workforce regions, and the Oklahoma City and Tulsa metropolitan areas. Detailed tables beyond those in the appendices are in a separate technical companion.

1.3 Terms used in the report

CTE is organized into broad program areas, also called **career clusters**, and more specific **pathways**, or **programs of study**. Welding and Metal Fabrication, for example, is a pathway within Manufacturing. A pathway prepares students for several occupations, and those occupations may be employed across several industries. A **program area** and an **economic priority sector** are different classifications even when their names are similar.

The report uses three measures of participation. Headcount records students who have completed one course in a pathway. A **concentrator** has enrolled in three or more credits in a single pathway, CareerTech's definition.[2] A **completer** has finished all courses the state requires for the pathway. These counts are recorded by pathway, so the same student can appear in more than one pathway. For example, a student who concentrates in two pathways contributes two concentrations. The report therefore uses concentrations when discussing these counts, rather than treating them as unique students.

Advanced work-based learning covers the four experience types CareerTech reports: internships, on-the-job training, pre-apprenticeships, and apprenticeships. Career talks, tours, and job shadowing help students explore work but are not counted here. Appendix B defines the terms in more detail.

1.4 What the evidence can and cannot show

The student activity files contain totals rather than records that follow individual students. Concentrations and completions are counted separately. Dividing completions by concentrations therefore describes the activity reported in a year; it does not show what share of students finished a program they entered. The study also does not estimate whether CTE participation caused any employment or earnings outcome.

CareerTech withholds counts below ten to protect student privacy, a practice called suppression. These withheld counts are excluded from reported totals, so the totals represent minimum counts. Suppression affects about 0.1 percent of concentrations in the statewide file and about 7 percent in the site-level file. It has the greatest effect on small rural sites and school district data, where activity is spread across many small programs. Ratios may be higher or lower than they would be with complete data, depending on how many counts are withheld from each part of the calculation.

Surveys, interviews, and focus groups explain how programs operate and what participants encounter. The survey drew 24 employers across 15 industry sectors, 20 school district superintendents and administrators, and 18 technology center administrators; the number answering each item is reported with each figure. Participants self-selected, so their accounts identify conditions and explanations, not how common each condition is statewide.

Post-graduation destinations come from instructors contacting former students and are not matched to education or employment records. Occupational alignment measures the connection

[2] Oklahoma Department of Career and Technology Education, "CareerTech Dictionary," accessed September 8, 2026, https://oklahoma.gov/careertech/media-center/brand-resources/careertech-dictionary.html.

between a pathway and the occupations it prepares students for; it does not record the jobs graduates obtain.

2 Participation and completion

This chapter reports who takes part in CTE, where reported completions occur, and where participants go after high school.

2.1 Headcount grew 6.3 percent over three years, concentrations 10.2 percent, and completions 14.8 percent

Nearly all of the headcount growth occurred in 2023–24; the following year added only 78 reported course enrollments. Concentrations and completions continued to rise in 2024–25 even though headcount was nearly unchanged. The data therefore show growth in participation in course sequences and in program completion, with little additional growth in overall participation during the final year.

Table 1 CTE participation and completion over three school years

Level of student activity	SY 2022–23	SY 2023–24	SY 2024–25
Headcount (one CTE course)	101,892	108,242	108,320
Concentrations	22,244	23,751	24,523
Completions (full pathway)	17,931	19,543	20,590
Concentration ratio	21.8%	21.9%	22.6%
Completion ratio	80.6%	82.3%	84.0%

Counts describe activity and are not unique students. The concentration ratio divides concentrations by headcount; the completion ratio divides completions by concentrations. Both are aggregate ratios, not cohort progression rates. Source: CareerTech statewide student activity data; Insightful Education Solutions calculations.

2.2 Technology centers hold 91.1 percent of reported concentrations and 97.6 percent of reported completions

In 2024–25, the ratio of reported completions to concentrations was 93.4 percent at technology centers and 23.3 percent in school district programs. More district activity than technology center activity is excluded because small counts are withheld for privacy. Even so, withheld counts cannot explain the full difference. The statewide file contains 707 more completions and 1,721 more concentrations than the site-level file. If every withheld completion belonged to a district and no withheld concentration did, the district completion ratio would rise to 58 percent, still 35 percentage points below the technology center figure. Only seven district pathways statewide reported ten or more completers.

Table 2 CTE activity by delivery setting in 2024–25

Delivery setting	Concentrations	Completions	Completion ratio
Technology centers	20,779	19,411	93.4%
School districts	2,023	472	23.3%
Total in site-level file	22,802	19,883	87.2%

The site-level file excludes more small counts than the statewide file, so totals differ from Table 1. Completion ratios are reported completions divided by reported concentrations. Source: CareerTech site-level student activity data; Insightful Education Solutions analysis.

The difference also appears in pathways offered in both settings. Science and Mathematics recorded 2,346 completions and 2,454 concentrations at technology centers, compared with 38 completions and 115 concentrations in school districts. Educators and administrators linked this pattern to program design: students enter a technology center program deliberately and follow a course sequence, while districts deliver most CTE as a single elective within a full academic schedule. Programs with the same pathway name may still differ in who enrolls and how long the program runs. The comparison therefore does not isolate the effect of the delivery setting. Appendix G compares the same pathways across settings; the technical companion reports the leading pathways in each setting.

Statewide completion figures combine activity from these two settings. Reporting concentrations and completions separately for school districts and technology centers would make their different roles and results easier to understand.

2.3 Completion ratios are similar across the 29 technology centers

Technology centers differ greatly in size, but their completion ratios are similar. In 2024–25, concentrations ranged from 138 at Chisholm Trail to 2,647 at Tulsa, a nineteen-fold difference. The five largest centers accounted for 43.3 percent of all center activity. The median completion ratio was 94.7 percent, and 26 of the 29 centers reported ratios of at least 92 percent. Ratios ranged from 82.1 percent at Metro to 98.5 percent at Western.

2.4 Educators name student access to pathways as their biggest challenge

In the educator survey, 84 percent of the 38 superintendents and administrators answering disagreed that there are always enough seats for interested students. Fifty-eight percent called seats very challenging, more than named teachers (39 percent) or funding (34 percent). Only 32 percent said they have a great deal of influence over seat availability, and 37 percent said little or none. In interviews, educators said demand exceeds seats in construction, welding, health science, and criminal justice and that some students land in a second-choice program; a workforce administrator described a 14-month wait for one plumbing program. Employers described the same programs as producing good candidates and running full.

> *"The issue to me is we have too many people that want to be here that can't be here… we have several programs that we just stopped taking applications for because we know they're never going to get in."*
>
> **— Administrator, Technology Center**

Administrators also identified transportation between high schools and technology centers, scheduling, and difficulty recruiting instructors from higher-paying trades as constraints on access. These accounts explain the barriers, but they do not establish how many qualified students are waiting for a seat. That information is needed to decide where and how much to expand.

> *"Two years ago we finally had clean data that showed us where our wait lists were… prior to that it was hand-tallied. So we built our own student information system."*
>
> **— Administrator, Technology Center**

2.5 Student groups differ in who moves from a first course into a sequence, not in who completes

Young women were 48.6 percent of headcount activity in 2024–25, 46.4 percent of concentrations, and 46.7 percent of completions. Female concentrations grew 14.7 percent over three years, against 6.4 percent for male concentrations. Completion ratios were similar: 84.5 percent for young women and 83.4 percent for young men.

For Black and American Indian students, the ratios of concentrations to headcount were 17.7 percent and 19.0 percent, respectively, compared with 22.6 percent statewide. Their completion ratios were within four percentage points of the statewide ratio of 84.0 percent. Hispanic students accounted for 18.4 percent of headcount and 20.0 percent of completions. Their headcount grew 13.5 percent, the most of any large group. The technical companion reports the full tables.

2.6 Agriculture is the largest program by headcount and among the smallest by completions

Agriculture, Food and Natural Resources illustrates why programs need to be assessed against their purpose. The statewide file recorded 22,235 headcount entries, 776 concentrations, and 145 completions in this program area. It accounted for one in five CTE course enrollments but only 0.7 percent of completions. These figures need different interpretations depending on whether programs are intended mainly to introduce students to agriculture or to guide them through a full occupational course sequence. Current reporting does not distinguish those purposes.

2.7 Reported destinations: 57.8 percent continuing education, 22.3 percent program-related employment

Among 14,541 reported post-graduation or post-completion transitions in 2024–25, 57.8 percent were continuing education and 22.3 percent were employment related to the program. Among those reported as employed, the share in a program- or cluster-related field rose from 77.5 to 80.0 percent over three years. The share reported as unemployed and seeking work rose from 2.2 to 3.0 percent. These are instructor-reported destinations, and 87 percent of surveyed superintendents and administrators said reliable data on where their graduates go is somewhat or very difficult to obtain. Appendix E reports the counts and collection method.

> *"We're relying on the [higher ed] regents to share data, and that can be two or three years behind… by the time we get it, if we've changed something and it didn't work, it can almost be a generation thing before you have to adjust… It's old data, slow data."*
>
> **— Administrator, School District**

Because these destinations rely on instructor follow-up, they provide an incomplete basis for assessing graduates' education and employment. Matching records across education and employment systems would give the state a more reliable way to verify outcomes.

3 Alignment to priority-sector occupations

This chapter addresses whether Oklahoma's high school CTE pathways prepare students for occupations employers are hiring for, in the sectors the State Chamber has prioritized, at wages that are sustainable.

3.1 How alignment is measured

The analysis compares 2024–25 concentrations in each pathway with annual job openings in the occupations that pathway prepares students for. It examines the state, each workforce region, and the two metropolitan areas. Counts are by pathway, so a student who concentrates in two pathways appears in both. CareerTech withholds counts below ten for privacy; the analysis records those withheld values as zero. A pathway with "no reported enrollment" may therefore have a small number of students.

The State Chamber named six priority sectors: Aerospace and Defense, Agribusiness, Energy, Health, Manufacturing, and Transportation and Logistics. Insightful defined each in industry terms anchored to the Oklahoma Department of Commerce's industry sectors, and the Chamber reviewed and approved the definitions. An occupation counts toward a sector when at least a quarter of its statewide jobs are in that sector's industries.

The study uses $21.18 an hour, or about $44,000 a year, as its sustainable-wage threshold. This is the highest county wage requirement in the Department of Commerce's Quality Jobs incentive program.[3] Wages are occupation medians in each geography rather than starting wages; "well-paid" means a median of at least $21.18 an hour. A pathway meets the main alignment measure when at least 10 percent of its well-paid openings statewide are in priority-sector occupations that can be entered without a four-year degree.[4] It must also prepare students for at least one such priority-

[3] Oklahoma Department of Commerce, Quality Jobs Program Guidelines (2026), https://www.okcommerce.gov/wp-content/uploads/Quality-Jobs-Guidelines.pdf. The $44,062 figure is the maximum annualized wage requirement the program applies in any Oklahoma county; divided by 2,080 hours it yields $21.18 per hour.

[4] Occupations are grouped by the education level Lightcast reports as typical entry education. Occupations open without a four-year degree are those whose typical entry education is no formal credential, a high school diploma, a postsecondary nondegree award, some college with no degree, or an associate degree.

sector occupation with 100 or more annual openings statewide and a local median wage of at least $21.18 an hour. A second measure applies the alignment criteria to occupations at all education levels, including those requiring a four-year degree or more. Appendix D gives the full method.

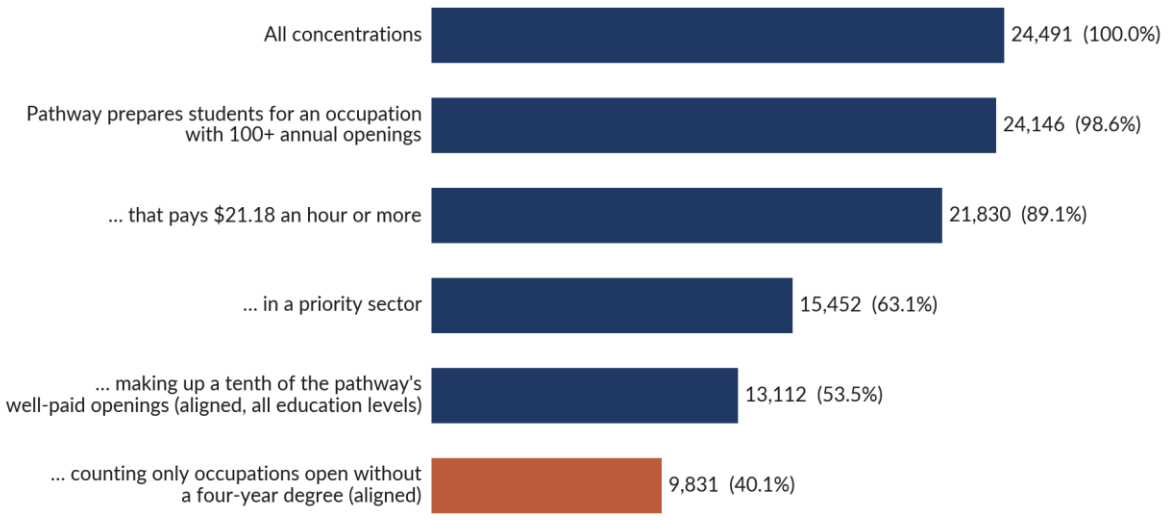
3.2 Forty percent of concentrations are in pathways aligned to priority-sector occupations open without a four-year degree

The share rises to 54 percent when the analysis includes occupations that require a four-year degree or more. Nearly all of the increase comes from Science and Mathematics and Administrative Support, whose priority-sector occupations mostly require at least a bachelor's degree. Each alignment share remained within two percentage points of its 2024–25 level in the previous two school years, while concentrations grew 10 percent.

Of the 11,379 concentrations not aligned on either measure, 4,985 are in pathways whose openings mostly pay above the threshold but fall outside the six sectors: Construction, Automotive Service, Law Enforcement Services, and Medium/Heavy Diesel Truck Repair. The three trades among them work mainly for contractors and repair shops rather than in the sectors' industries. Another 3,187 are in pathways where most openings pay below $21.18, led by Personal Care Services, Restaurants and Food/Beverage Services, and Early Care Development and Services. A further 3,180 are in pathways whose occupations mostly require a bachelor's degree, such as Web and Digital Communications, Network Systems, and Marketing Management.

Requiring a connection to the six priority sectors produces the largest reduction in the share of concentrations counted as aligned, from 89 percent to 63 percent at that stage of the analysis. The wage requirement excludes relatively few additional concentrations because a pathway can satisfy that requirement through one occupation with at least 100 annual openings and a median wage of $21.18 or more. A pathway may therefore pass the alignment test even when most of its associated openings pay below the threshold. The next section examines that distinction.

Figure 1 Concentrations in pathways passing each test, applied in sequence, 2024–25



Each bar adds a condition to the one above. The total includes 27 concentrations in two pre-occupational pathways not mapped to any occupation. Sources: CareerTech student activity data; Lightcast occupation tables, Q3 2026.

3.3 Aligned does not always mean well-paid

Therapeutic Services, the state's largest pathway, prepares students mainly for Health occupations such as nursing assistant, at a median $17.27 an hour. With 3,634 concentrations, Therapeutic Services is aligned to Health, yet 35 percent of the openings it prepares students for pay $21.18 or more, against 69 percent across all pathways, weighted by enrollment. Its three largest destinations fall short: nursing assistants, medical assistants at $18.63, and medical secretaries at $18.43. The openings above the threshold are for licensed practical nurses, dental assistants, physical therapist assistants, and medical records specialists.

Health as a whole follows the same pattern. Of its 21,225 annual openings for workers without a four-year degree, 22 percent pay $21.18 or more; the largest are home health and personal care aides, at $13.32, and nursing assistants. Therapeutic Services holds 3,634 of the 4,370 concentrations counted toward Health, so most of the state's Health enrollment prepares students for the lower-paying part of the sector.

Table 3 Share of openings paying $21.18 or more, six large pathways, 2024–25

Pathway	Concentrations	Share of openings paying $21.18 or more	Aligned without a four-year degree
Therapeutic Services	3,634	35%	Yes
Science and Mathematics	2,578	100%	No
Construction	2,246	91%	No
Personal Care Services	1,652	0%	No
Automotive Service	1,477	89%	No
Restaurants and Food/Beverage Services	708	5%	No

Shares are of each pathway's annual openings, across the occupations it prepares students for that report a median wage. Alignment uses occupations open without a four-year degree. Sources: CareerTech student activity data; Lightcast occupation tables, Q3 2026.

3.4 Energy and Transportation and Logistics have the least CTE enrollment relative to the opportunities

Energy and Transportation and Logistics have relatively few CTE concentrations compared with their annual openings for well-paid occupations that do not require a four-year degree. Energy has 2,179 such openings, representing 97 percent of its openings at that education level, and three associated pathways with 406 concentrations. Transportation and Logistics has 6,524 such openings and four pathways with 1,884 concentrations. Manufacturing has both the most openings meeting these criteria, 9,362 a year, and the most concentrations, 5,172. Aerospace and Defense has 936 such openings and 1,851 concentrations. These comparisons describe relative program activity, not how many graduates are available to fill the openings.

Table 4 Well-paid openings for workers without a four-year degree, and CTE enrollment, by priority sector, statewide

Sector	Openings paying $21.18+, no four-year degree	Share of openings at that education level paying $21.18+	Pathways	Concentrations
Manufacturing	9,362	58%	12	5,172
Transportation and Logistics	6,524	50%	4	1,884
Health	4,645	22%	3	4,370
Energy	2,179	97%	3	406
Aerospace and Defense	936	100%	3	1,851
Agribusiness	378	10%	1	215

Annual openings in each sector's priority-sector occupations. A pathway can count toward more than one sector, so no column sums to a state total. Openings recur every year while concentrations span several grades, so compare rows rather than reading the figures as how many graduates a sector could hire. Sources: Lightcast occupation tables, Q3 2026; CareerTech student activity data, 2024–25.

Fifty-two well-paid priority-sector occupations open without a four-year degree have no CTE pathway preparing students for them. Together they carry 7,141 annual openings. Not all of them suit a high school pathway. The two largest, first-line supervisors of production workers and of transportation workers, are reached by promotion, while inspectors, testers, and sorters, service unit operators, and molding machine operators are entered directly from training or a high school credential. Appendix G lists the largest.

3.5 Regional alignment runs from 30 percent of concentrations in Western Oklahoma to 45 percent in the Northeast

Regional alignment shares reflect which pathways are offered and where concentrations are distributed among them. Western Oklahoma has the lowest share under the measure that excludes occupations requiring a four-year degree. Its largest pathway is Science and Mathematics, which connects to priority-sector occupations only when degree-requiring occupations are included. Concentrations in that pathway therefore do not count as aligned under the main measure, lowering the region's overall share.

Truck driving shows how thin regional offerings can be. Transportation Operations has 33 concentrations statewide, all in the Green Country and Northeast regions. In Central, Southern, Western, and South Central Oklahoma, no pathway with reported enrollment prepares students for heavy and tractor-trailer truck driving, which has 1,075 annual openings in Central, 380 in Southern, 344 in Western, and 128 in South Central. Part of this demand is also out of a high school graduate's direct reach: an interstate commercial driver's license requires age 21, and Oklahoma issues an intrastate license at 18.[5]

A technology center can serve more than one workforce region or metropolitan area. The analysis includes that center's concentrations in every area its service district touches, so regional counts overlap and cannot be added to produce a state total. Comparisons therefore use shares rather than

[5] 49 C.F.R. § 391.11(b)(1) sets the minimum age for interstate commercial motor vehicle operation at 21; Oklahoma issues an intrastate commercial driver license at 18. Okla. Stat. tit. 47, § 6-107.1.

counts. The six workforce regions reflect boundaries in place before two consolidations during the study.[6] Appendix G reports alignment and the share of well-paid openings for each geography.

3.6 Alignment depends on which list of industry priorities is used

Three lists of economic priority are in use in Oklahoma. The State Chamber names six priority sectors. The Department of Commerce names ten industry sectors in which it recruits employers, and four of the Chamber's six are among them.[7] The Employment Security Commission publishes 100 Critical Occupations, which CareerTech republishes.[8] The state has no shared statement of which occupations its high school CTE system should serve. Appendix G sets the Chamber's and Commerce's lists side by side.

Using the State Chamber's sectors and the Critical Occupations list produces different assessments for 21 of the 46 pathways with reported enrollment. Those pathways account for 43 percent of concentrations. This comparison includes occupations at all education levels, so a pathway can be aligned to a Chamber sector through an occupation that requires a degree. For example, most openings associated with Construction and Automotive Service are on the Critical Occupations list, but neither pathway is aligned to a Chamber sector. Science and Mathematics shows the reverse pattern: it is aligned to Health through a doctoral-level occupation that is not on the Critical Occupations list. The lists also use different wage thresholds. The Critical Occupations list excludes occupations paying below $17.10 an hour, compared with this study's threshold of $21.18, so some differences reflect pay as well as sector priorities.

These differences matter if alignment is used to fund, approve, or review pathways. State leaders first need to agree on which occupations high school CTE should prepare students for and which criteria will be used to assess that connection.

4 Credentials and their value to employers

This chapter reports how many state-promoted industry-recognized credentials students earn, which ones, what employers and educators say they are worth, and what keeps students from earning them.

4.1 Credentials earned rose 32.7 percent over three years

Students earned 10,541 state-promoted credentials in 2022–23, 13,009 in 2023–24, and 13,987 in 2024–25. Credentials per completion rose from 0.59 to 0.68. Because a student can earn more than one credential, the ratio does not give the share of completers who earned one.

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[6] Oklahoma Office of Workforce Development, "Local Workforce Development Boards," https://oklahoma.gov/workforce/partners/lwdb.html, accessed September 10, 2026. Green Country absorbed Northeast on July 1, 2025; Central and Western merged on January 1, 2026, as Oklahoma's Workforce Board. The six regions used here nest inside the four current areas without splitting a county.

[7] Oklahoma Department of Commerce, "Industry Sectors," https://www.okcommerce.gov/doing-business/business-relocation-expansion/industry-sectors/ (accessed September 21, 2026).

[8] Oklahoma Employment Security Commission, "Oklahoma's 100 Critical Occupations (2022–2032)," republished by Oklahoma CareerTech, https://oklahoma.gov/content/dam/ok/en/careertech/about/reports/economic-and-workforce-data/okla-critical-occupations-2022-2032.pdf. Occupations projected to decline, with fewer than 100 jobs, or with median pay below $17.10 an hour are excluded, and the remainder are ranked by annual openings.

Table 5 State-promoted credential attainment

Metric	SY 2022–23	SY 2023–24	SY 2024–25
Total credentials earned	10,541	13,009	13,987
Credentials earned per completion	0.59	0.67	0.68
Credentials with fewer than 10 earners	281	251	242
Credentials with 10 or more earners	144	174	183
Share of credentials with fewer than 10 earners	66.1%	59.1%	56.9%

Counts include certifications on CareerTech's approved assessment list and are based on instructor submissions; micro-credentials and other credential types were outside the data request, so totals are lower than a count of all credentials would be. The list contained 425 credentials. Suppressed counts are excluded from reported totals. Source: CareerTech student activity data; Insightful Education Solutions analysis.

4.2 Most of the 425 promoted credentials are earned by fewer than ten students a year

In 2024–25, 242 of the 425 promoted credentials, 56.9 percent, had fewer than ten reported earners, down from 281 in 2022–23. A credential earned by few students may still matter to a small occupation or region. But a credential's value to an employer depends on the employer recognizing it, and most of the catalog is earned too rarely to be recognized.

The top of the list is stable and general. Five credentials held a top-ten position in all three years: Long Term Care Nurse Aide, Employability Soft Skills, OSHA 10 Construction, First Aid/CPR/AED, and OSHA 10 General Industry, all broadly applicable and low-cost. Construction, Welding and Metal Fabrication, and Automotive Service together produced 4,976 technology center completers in 2024–25, and none of their signature certifications held a top-ten position that year.

The catalog mixes credentials of different kinds and purposes. A workplace safety card, an employability certificate, an entry-level license such as nurse aide, and an occupational certification that takes a year of study to earn sit on the same list and count the same in the totals. The data cannot rank them, and the study does not attempt to. CareerTech told the study it is developing a tiered list that differentiates credentials by value, which would give the state the distinction its current counts lack.

4.3 Employers value progress toward a postsecondary credential

In the employer survey, 75 percent rated continued work toward a postsecondary or advanced-trades credential very important, the highest rating of any student outcome. Asked how important it is that a high school CTE graduate holds an industry certification before entering their workforce, 31 percent said very important or important and 43 percent said somewhat important. Educators, asked to rank seven indicators of readiness, put an industry credential fourth.

Table 6 What employers and educators say about credentials

Survey item	Result
Employers: importance that students can continue working toward a credential aligned with their pathway at the postsecondary or advanced-trades level	Very important 75%; important 21%; somewhat important 4% (n = 24)

Survey item	Result
Employers: importance that high school CTE graduates earn an industry certification before entering the workforce	Very important 22%; important 9%; somewhat important 43%; not important 13%; not relevant to the business 13% (n = 23)
Educators: ensuring students earn an industry credential that employers value	Very challenging 13%; somewhat challenging 71%; not a challenge 16% (n = 38)
Educators: an industry credential earned in high school as an indicator of readiness	Ranked fourth of seven indicators, behind general education courses, soft skills, and CTE pathway courses (n = 38)

n is the number answering each item. Both surveys are self-selected: 24 employers across 15 industry sectors; 38 school district and technology center superintendents and administrators. Sources: employer and educator survey summaries.

The interviews explain the difference. Employers described what gives a credential value as the mastery behind it, not the document. One called a certificate “a piece of paper that no one cares about” without the learning behind it and said “junk” certifications exist; an aerospace employer set the test as a graduate who can start work on day one without employer-funded training. A technology center administrator drew the same line, contrasting credentials built and reviewed with industry, such as the LPN and CPA, with high school certificates he described as meaningless. Where no CTE-aligned credential exists, one industry association is building its own, and several employers asked that certifications be matched to a student’s trade by junior year rather than kept generic.

> *“There’s a lot of what we would call ‘junk certificates’ out there, and businesses should have more say in narrowing down what is needed and what should be tossed. A certification should represent what we expect to see in an employee — skills-wise. It’s the learning process leading up to a student sitting for a certification exam, not the certification itself. If the certification doesn’t validate demonstrated knowledge and skills for a business, then schools shouldn’t encourage students to get them.”*
>
> **— Employer, Energy Sector**

Employers are rarely part of deciding which credentials count. Participants in one employer focus group said they had never been asked to assess the value of a credential a CTE program promotes. Educators said validation happens through local program advisory boards rather than a consistent process, and 84 percent of educators surveyed called ensuring that students earn a credential employers value at least somewhat challenging.

4.4 Credential exam fees are a barrier to student attainment

At one technology center, a $129 certification exam fee deterred most of a graduating group; at another, a $300 networking certification fee posed the same barrier. Students said fees are typically not reimbursed, that some credentials are optional and not pushed by instructors, and that advanced credentials were sometimes not promoted at all. Reported pass rates among students who did test were high. Cost, not preparation, is the barrier the accounts describe; how students who did not test would have performed is not observed.

Two remedies follow, and they are separable: a tiered list built with employers, which CareerTech is developing, and exam-fee coverage scoped to the credentials that list validates.

> *"No one's covering for certification exams, and the advanced ones can be pretty expensive, which puts them out of reach for us. We know our stuff, but we can't show it through earned certifications because they cost too much for us to pay for the exams ourselves."*
>
> **— Student, Welding Pathway**

5 Work-based learning and employer partnerships

This chapter reports how much advanced work-based learning students receive, what decides who gets it, and how employers take part in pathways.

5.1 Advanced work-based learning fell 27.8 percent over three years

Reported advanced experiences fell from 1,771 in 2022–23 to 1,279 in 2024–25. Apprenticeships fell from 151 to 30; apprenticeships and pre-apprenticeships together were 60 experiences statewide in 2024–25. On-the-job training and internships carry nearly all remaining volume, and both fell by about a fifth.

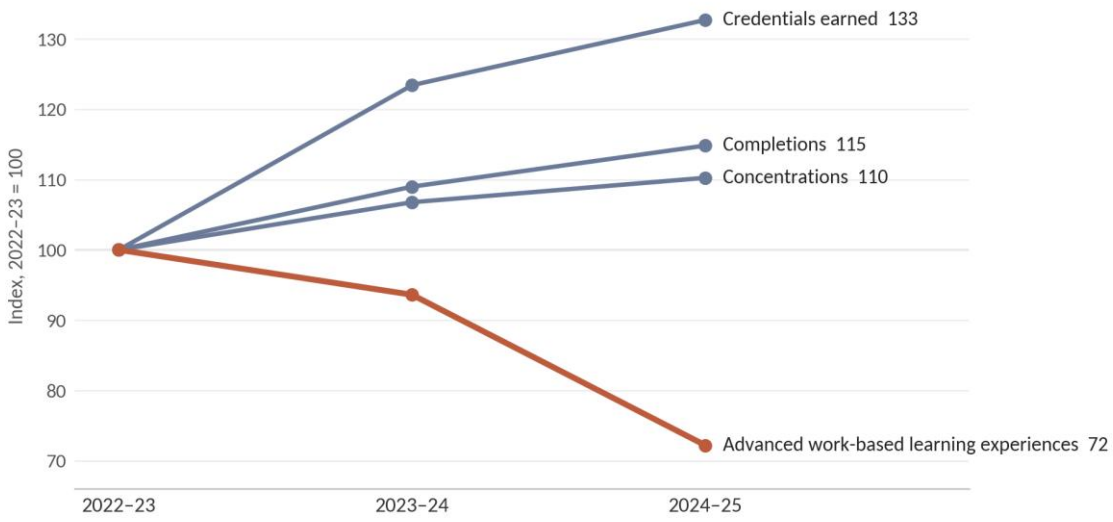
Table 7 Advanced work-based learning experiences by type

Advanced WBL type	SY 2022–23	SY 2023–24	SY 2024–25
On-the-Job Training (OJT)	966	864	737
Internship	616	632	482
Apprenticeship	151	120	30
Pre-Apprenticeship	38	42	30
Total	**1,771**	**1,658**	**1,279**

Counts cover the four advanced experience types in the data request, not career exploration activities such as tours and job shadowing. They count experiences, not unique students. Source: CareerTech student activity data.

The decline ran against every other measure. Concentrations grew 10.2 percent over the same three years, completions 14.8 percent, and credentials earned 32.7 percent. Experiences per 100 concentrations fell from 8.0 to 5.2. Real industry experience is one of the five elements in the advisory board's definition of an effective pathway, and it is the one element a school cannot supply on its own.

Figure 2 Advanced work-based learning experiences against concentrations, completions, and credentials, indexed to 2022–23



Each line shows a statewide count as a share of its 2022–23 value. Sources: CareerTech statewide student activity data (Tables 1, 5, and 7).

5.2 Placements depend on program requirements, teacher contacts, and willing employers

> *"I don't think our teachers do a super phenomenal job just talking about and emphasizing internships and other longer-term employer opportunities. I had to find it [my internship] myself, which shouldn't be the case."*
>
> **— Student, Bioscience Pathway**

Placement is highest in small program areas with workplace hours built into the program: Education and Training records 54 experiences per 100 concentrations, while Health Science, the largest program area, records 3. Where requirements exist, they are usually set by outside accrediting and licensing bodies rather than by state policy. Elsewhere, educators said there is no structured process for recruiting employers. Individual teachers find placements and hold the relationships, and they named their own time and contacts as the limits. Students' accounts ranged from sustained workplace experience to a single employer visit or a competition.

Employers described why advanced placements are harder to offer than tours or guest talks: supervision takes staff time, mistakes are costly in fields such as aviation, some sites bar anyone under 18, and schedules must work for both school and employer. Educators and students named the age limit most often. Participants gave three different accounts of what liability protection exists, from a state law that has helped to a call for protections that do not yet exist. The interviews do not establish which protections apply to which placements; they establish that employers hear more than one answer. Appendix G summarizes the barriers each participant group named.

5.3 Employers rank transportation and scheduling first among partnering challenges

Student employability skills ranked second among partnering challenges and legal liabilities third (Table 8). Thirty-five percent of employers had never been asked to host students and another 35 percent only occasionally; 26 percent had never been asked to review curriculum.

Table 8 Employer survey findings

Survey item	Result
Approached to review curriculum	30% frequently; 43% occasionally; 26% never (n = 23)
Approached to host students in work-based learning	30% frequently; 35% occasionally; 35% never (n = 23)
Rate local pathways as very well or somewhat aligned with employer needs	67%; 25% unsure (n = 24)
Student outcomes rated very important	Continuing toward a postsecondary or advanced-trades credential, 75%; making informed career decisions, 71%; being engaged with different employers, 29% (n = 24)
Partnering challenges, ranked by mean rank	1. Transportation and scheduling; 2. Student employability skills; 3. Legal liabilities (n = 23)
Can access public data on local CTE pathways very or somewhat easily	46%; 33% not aware such data exists (n = 24)
Would increase engagement: more accessible information on pathway offerings	61% (n = 23)
Interested in a regional or statewide organization to coordinate employer–CTE partnerships	48% very; 43% somewhat (n = 21)

The survey received 24 employer responses across 15 industry sectors; n is the number answering each item. The sample is self-selected. Employer ratings of alignment are perceptions, not the occupational measure used in Chapter 3. The challenge ranking used a scale on which 6 was most challenging; student employability skills drew the most first-place votes (7 of 23) while transportation and scheduling ranked first on the mean. Source: employer survey summary.

5.4 Employers asked for earlier involvement and an organization to coordinate partnerships

About seven in ten employers answering had been asked to review curriculum at least occasionally, but only 30 percent frequently. Employers described outreach oriented toward placement rather than design: schools share who is graduating and what students are certified in, and requests for curriculum input are rare. Educators confirmed there is no formal process; input arrives through advisory boards, surveys, and teacher relationships.

Employers in one focus group described the absence of a statewide or regional intermediary: an organization responsible for connecting employer needs with technology center and school district capacity. They said they do not know whom to call and find it difficult to engage across multiple districts. As a result, sustained partnerships depend on local relationships. A construction employer said many companies would participate if asked but are rarely approached; others acknowledged their own responsibility to engage. When a relationship depends on one teacher, a staffing change can disrupt it. Among employers answering the survey question, 48 percent were very interested and 43 percent somewhat interested in a regional or statewide organization to coordinate CTE partnerships.

> *"…they have a different set of advisory committee members, even if they have the same course names. There could be a difference, because that group of people is going to say, well, this is more important. So even at the same school we were having a difference of opinions. However, our expectation is that everybody gets together, and we agree, which is hard, because sometimes the employers don't even agree…"*
>
> **— Administrator, Technology Center**

> *"When it comes to connecting with employers, we'll get a lot of people — send them an email, invite them to meetings — and then after a couple, it's just crickets. That's one of the frustrations we have with trying to build partnerships with businesses. Maybe we're not asking the right questions or engaging them the way they need to, but they need to tell us that."*
>
> **— Educator, Technology Center**

Employers most often named the State Chamber as a possible link, and one group named the state workforce commission. Because the State Chamber Research Foundation leads this study, those are reported as participants' views, not the study's conclusion.

These accounts point to a need for an organization responsible for maintaining employer relationships and helping willing employers participate.

5.5 Employers describe technical preparation as strong; employability skills are a gap

Employers described graduates' technical preparation as generally sound and punctuality, professionalism, communication, applied mathematics, and writing as the persistent gap. In the survey, 65 percent said they sometimes have difficulty finding entry-level candidates with the technical skills their positions need, and 13 percent said frequently. Employers proposed tying coursework more clearly to workplace tasks, career exposure beginning in middle school, and business instruction for trade students.

5.6 Employers asked for accessible information on pathways and outcomes

Employers said they judge programs by reputation because they have never seen CTE outcome data. A third of those surveyed were not aware that public data on local CTE pathways exist, and 61 percent said more accessible information on pathway offerings would increase their engagement. Several asked for outcome data by program from the centers they hire from, and for funding tied to outcomes.

6 Recommendations

The findings point to five recommendations for state and regional leaders, numbered 6.1 through 6.5. Shared expectations and reliable, accessible data come first because they provide a basis for decisions about partnerships, credentials, workplace learning, and program expansion. Each recommendation identifies the action needed and how it responds to the findings.

> *"The state can't keep saying it wants to do better… but funding CTE at a fraction of the state's education budget, while higher ed gets a sizable share is not right. Nobody wants to say this, but it's the truth."*
>
> **— Administrator, Technology Center**

6.1 Establish clearer expectations for CTE pathways and make their results accessible

State leaders, CareerTech, education and workforce agencies, and employers should agree on the purpose of each type of pathway and the outcomes used to judge it. Exploratory programs need measures suited to exploration. Occupational programs need expectations for completion, credentials, workplace learning, and routes to employment or further study. The same agreement should name the sectors and occupations that count as state priorities and the wage that counts as sustainable.

> *"We have a framework — the framework tells us the courses. But the standards and everything else is up to you… The state doesn't have the manpower to standardize competencies… what's in those courses can vary which is a problem if an employer is looking for consistency."*
>
> **— Administrator, Technology Center**

Reporting should separate school district and technology center activity, identify the populations and periods covered, and explain which counts are withheld for privacy. Verified information on graduates' education, employment, wages, and the match between their credentials and occupations should replace instructor follow-up as the basis for judging outcomes. Pathway offerings and program-level results should be accessible to students, families, and employers. Small sites need reporting that protects privacy while remaining useful, such as combining several years of data.

> *"Outsiders complain about not having data to help support CTE, but we're in the same boat as educators. The more real-time the data is for us the better. We don't need autopsy data — we'd like to know what's going on before the body's dead so we can have stronger insight and consider possible changes."*
>
> **— Administrators, Technology Center and School District (a shared response)**

Once definitions and verified measures are in place, the state should tie a defined share of pathway funding to labor-market alignment and completer outcomes, with the responsible entity, the calculation, and the treatment of exploratory programs made explicit. A phased start would let the state check data quality and unintended effects, including incentives to exclude students who need more support or to drop well-paid programs outside the priority sectors, before the condition expands.

6.2 Establish an intermediary to connect employers and CTE providers

Establish a statewide intermediary with regional partners to coordinate connections among employers, students, school districts, and technology centers. This organization or partnership should give employers a clear point of contact, involve them in program design and credential review, help arrange placements, reach smaller and privately held firms, and maintain relationships when personnel change. These responsibilities respond directly to the coordination gaps employers described.

> *"Sometimes employers don't know what to ask for… there's definitely a population of people looking for workers that I just don't think they can articulate what they need."*
>
> **— Administrator, Technology Center**

Before chartering a new intermediary, assess whether an existing organization or partnership can perform the work, and define its authority, funding, accountability, and relationship to agencies and local providers. A pilot in two or three priority sectors would test the arrangement before wider adoption. Decide at the outset whether the coordinating organization has any role in funding decisions or access to student-level data, and judge it on employer participation in design, sustained partnerships, completed placements, and participation by smaller firms.

6.3 Review credentials with employers and cover exam fees for the credentials they validate

CareerTech and state partners should build on the tiered credential list CareerTech is developing, with recurring reviews involving employers from the occupations concerned, separating safety and general employability credentials from occupational certifications and assessing each against hiring, licensing, further training, and advancement. Reporting should show annual attainment counts and the purpose of each credential; rank changes alone should not decide whether a credential stays on the promoted list.

Use the review to decide which credentials the state promotes and which qualify for exam-fee coverage. A fee program should record how many eligible students attempt and pass exams, why others do not test, and how the credentials are used, so coverage can be refined on evidence.

6.4 Expand access to advanced work-based learning

> *"Work-based learning partnerships between employers and students could definitely be strengthened. We get asked to do things all the time, but how these arrangements come together seems pretty fuzzy. I'd rather not do these partnerships; our company doesn't really benefit from them. At times, it feels like we're just doing a school/tech center a favor. Better program guidance and 'success expectations' is really needed."*
>
> **— Employer, Business Sector**

Set program-level expectations for advanced work-based learning that state the learning objectives, supervision, assessment, and each partner's responsibilities, and pair them with practical support for transportation, scheduling, and placements that carry pay and course credit where feasible.

Issue one authoritative statement of the age, insurance, liability, and indemnity rules that apply when employers host students, distinguishing legal requirements from employer policy, and deliver it through the channels employers use. Regional partners should help employers and educators apply it. Track access as well as volume: unique students placed as well as experiences, completed placements, and who cannot take part and why.

6.5 Expand programs where demand and evidence support it

Review the policies governing program offerings, admissions, and seat availability at local and regional levels, and identify the specific constraint in each case: instructors, facilities, equipment, transportation, scheduling, or decision-making authority. The remedy should match the constraint.

Use occupational demand, wages, entry requirements, and routes to further education when deciding where to expand or revise programs, and include student interest and well-paid local occupations outside the selected sectors. Distinguish occupations open after high school training from those that require further credentials, age eligibility, experience, or promotion. Pair expansion with a review of the existing program mix and plans for instructor development or redeployment, and track waitlists, first-choice enrollment, access across student groups, placements, and verified outcomes.

> *"I know this is a shared concern across school districts and tech centers — and it has to do with program capacity. An example, my technology center said they could take 20 kids for its pre-engineering program, but it's not just 'take 20' of our kids. They took six of our kids, then opened it up to everybody else. Well, we had 100 kids in our district who wanted to be in pre-engineering, so we made the decision to offer that program ourselves and not have it be a tech program. And we don't get the funding that comes with it like tech centers do. The system needs to be better."*
>
> **— Administrator, School District**

Conclusion

Oklahoma is not building from a weak foundation. Technology centers report high completion ratios, and participating employers described a willingness to engage. State leaders can build on that by clarifying which occupations pathways should prepare students for, assigning responsibility for sustained employer partnerships, expanding access where demand and wages justify it, and making verified outcomes accessible to students, families, and employers.

> *"What they offer, when kids have the opportunity to be there, is a great product. It's the limitations — the number of students who get to participate — that's the biggest issue."*
>
> **— Administrator, School District**

Appendix A. Advisory board

The 14-member Advisory Board convened in Phase 1 of the study and remained engaged throughout. Members are listed below with their organizations.

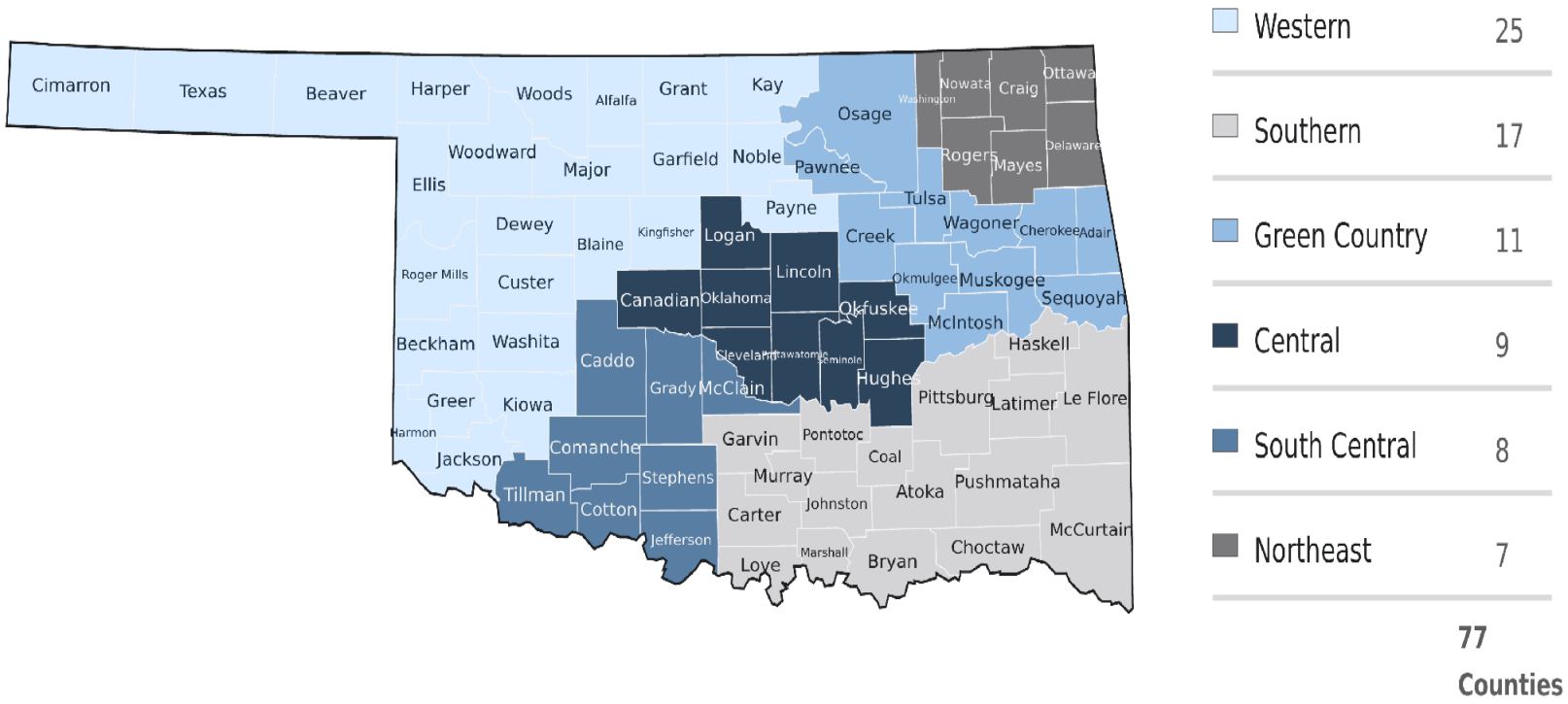
#	First Name	Last Name	Organization
1	Roxanne	Pollard	P&K Equipment
2	Michelle	Keylon	Francis Tuttle Technology Center
3	Brent	Haken	Oklahoma Department of Career and Technology Education
4	Brian	Beller	B&H Construction
5	Scott	Fry	MidAmerica Industrial Park
6	Colby	Clodfelter	The Goodyear Tire & Rubber Company
7	Lucien	Bridges	Hitachi Vantara
8	Libby	Ediger	Good Jobs Initiative (Tulsa)
9	Dan	Hamlin	Office of the Oklahoma Secretary of Education
10	Tyler	Bridges	Stillwater Public Schools
11	Bryan	Frazier	Claremore Public Schools
12	Barclay	Holt	High Plains Technology Center
13	Jene	Harmon	Webco Industries
14	John	Taylor	Field Aerospace

Appendix B. CTE definitions

Term	Definition
CTE Headcount	A student who has completed one course in a CTE program area or pathway
CTE Concentrator	A student who has enrolled in three or more credits in a single CTE pathway (CareerTech definition)
CTE Completer	A student who has completed all required courses (or similar) in a CTE program area or pathway, as defined by the state
CTE Program Area (or Career Cluster)	A broad career field grouping related pathways (e.g., health science, manufacturing, education); distinct from the economic priority sectors used in the demand analysis
CTE Pathway (or Program of Study)	The dedicated set of courses or course options aligned to one or more specific occupations under a program area (e.g., welding & metal fabrication pathway, under manufacturing)
Advanced Work-Based Learning Types	
Internship	*A position for a student or trainee to work in an organization for a limited duration, sometimes without pay, to gain work experience, satisfy credential requirements, and/or earn course credit.*
On-the-Job Training (OJT)	*A hands-on method of teaching the skills, knowledge, and competencies needed to perform a specific job, with employees learning in the environment where they will apply them.*
Pre-Apprenticeship	*A program designed to prepare individuals to enter and succeed in a Registered Apprenticeship program, with a formal relationship to one or more such programs.*
Apprenticeship	A structured training experience combining supervised work with instruction. Registered Apprenticeships follow the applicable registration requirements. The activity data use the categories reported by CareerTech.

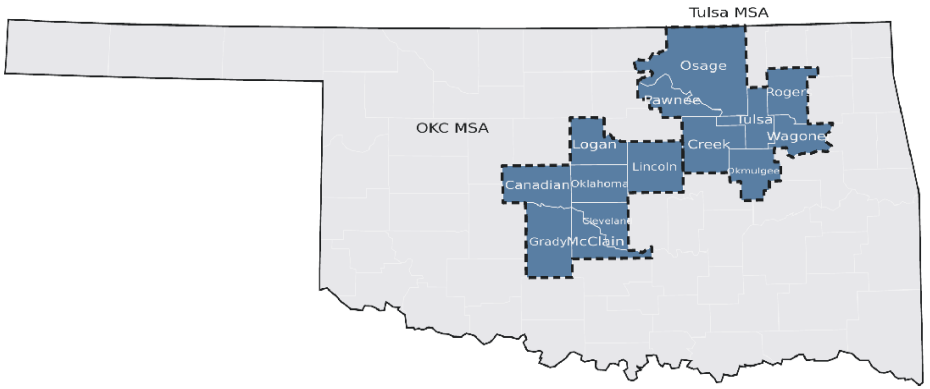
Appendix C. Workforce regions, metropolitan areas, and technology center districts

Figure C.1 Oklahoma's six workforce regions



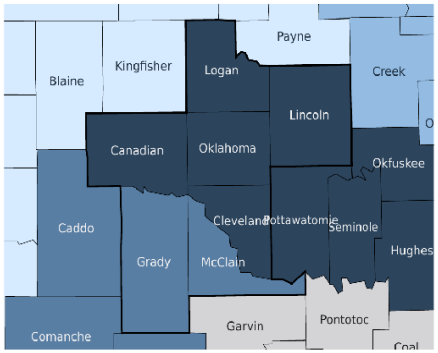
The study uses six historical workforce regions covering all 77 counties: Western (25 counties), Southern (17), Green Country (11), Central (9), South Central (8), and Northeast (7). The map describes the study geography rather than the current number of workforce boards.

Figure C.2 Oklahoma City and Tulsa metropolitan statistical areas (MSAs)



Oklahoma City, OK MSA — 7 counties
Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma

Tulsa, OK MSA — 7 counties
Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner

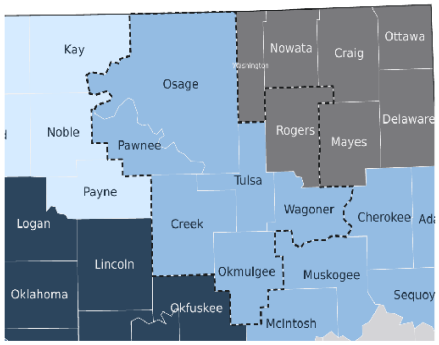


Oklahoma City MSA

Draws from Central (Canadian, Cleveland, Lincoln, Logan, Oklahoma) and South Central (Grady, McClain). Hughes, Okfuskee and Pottawatomie stay outside it.

Tulsa MSA

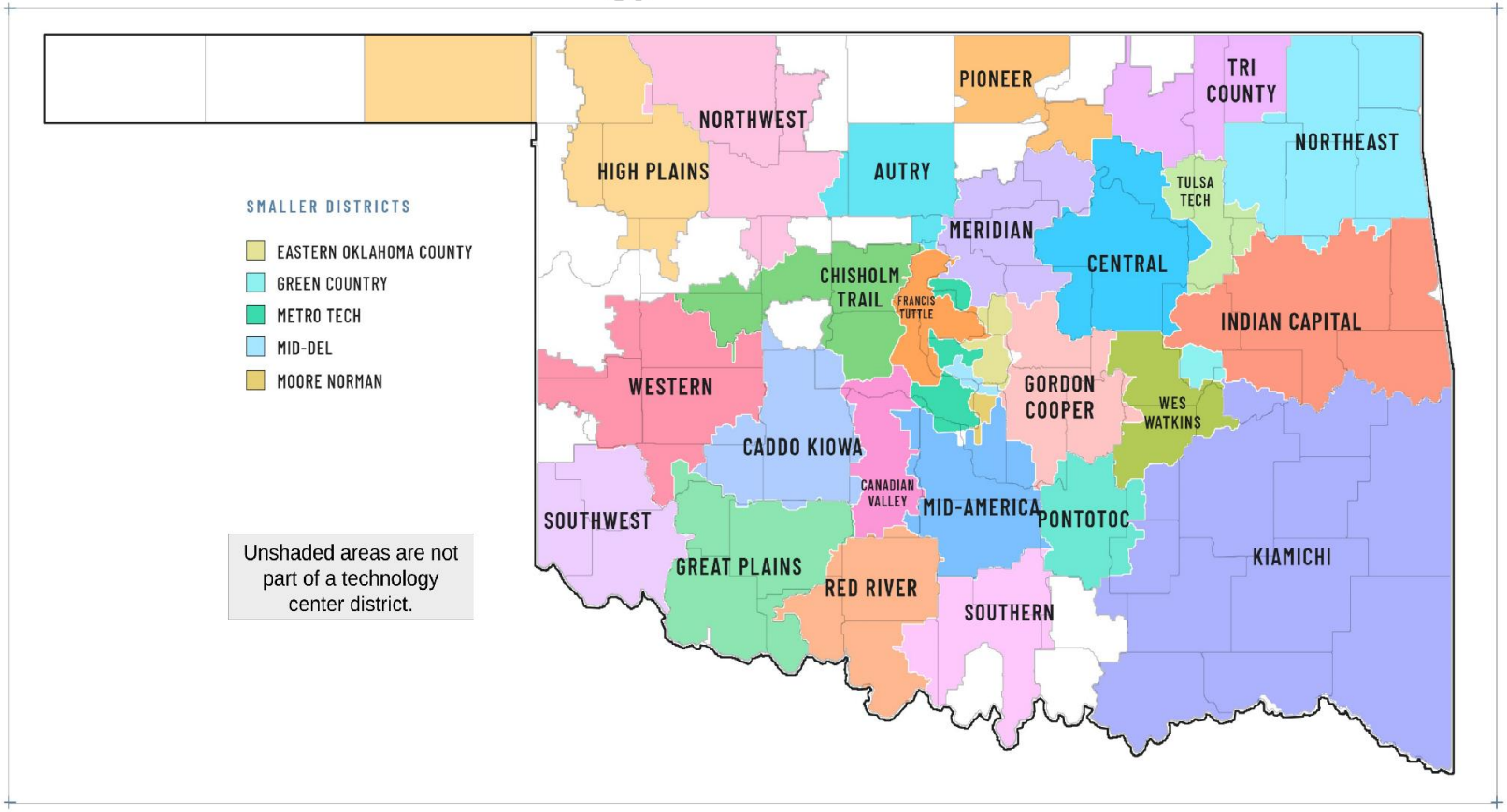
Draws from Green Country (Creek, Okmulgee, Osage, Pawnee, Tulsa, Wagoner) and Northeast (Rogers). Adair, Cherokee, McIntosh and Sequoyah stay outside it.



Oklahoma City, OK MSA (7 counties): Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma. Tulsa, OK MSA (7 counties): Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner. Both MSAs follow federal boundaries that cross workforce region lines.

Figure C.3 Oklahoma's 29 technology center districts

Oklahoma's 29 Technology Center Districts



Unshaded areas are not part of a technology center district. Service areas are assembled from whole and partial school districts, so their boundaries do not follow county lines; the technical companion lists the counties served by more than one center.

Appendix D. Methods and study design

The study was organized around three research questions. The thematic chapters bring the resulting evidence together around the issues facing students, educators, employers, and policymakers.

Research questions

Student outcomes and pathway quality. Where does CTE participation and completion occur, in which fields, and how do pathways perform against the study's quality indicators?

Workforce alignment. How do pathways connect to occupations in the selected priority sectors, what wages and demand do those occupations offer, and where are the gaps?

Employer engagement. How do employers participate in curriculum design and hands-on learning, and what supports or limits those partnerships?

Table D.1 Research questions and indicators

Research question	Indicators examined
RQ1: Student outcomes and pathway quality	Distribution of concentrators and completers by career cluster and program of study; pathway completion; attainment of state-promoted industry-recognized credentials; completion of advanced-level WBL; placement in postsecondary education or employment within six months of graduation; consistency of results across technology centers and LEAs
RQ2: Workforce alignment	Employment and projected openings in the six priority sectors; number and share of sector-core occupations whose median wage meets the sustainable-wage floor; connection of programs of study to relevant occupations; gaps between pathway activity and sustainable-wage demand, statewide and by region
RQ3: Employer engagement	Employer roles in curriculum and pathway design; employer participation in hands-on learning, including WBL; strength and sustainability of partnerships; barriers to deeper engagement

Source: study evaluation framework developed with the advisory board. The terms used for completion and alignment should be read with the definitions and limitations in the main report and the demand analysis methodology below.

Evidence and interpretation

CareerTech provided aggregate student activity data under a data-sharing agreement dated June 18, 2026. The request covered concentrations and completions, state-promoted certifications, advanced workplace experiences, and post-graduation transitions. Breakdowns included program areas, pathways, delivery settings, and geographic units. The labor market analysis connected pathways to occupations using CareerTech program frameworks and federal instructional-program and occupation crosswalks. The demand analysis methodology below documents the sources and tests.

The online survey received 62 responses: 24 employers across 15 industry sectors, 20 school district educators and administrators, and 18 technology center administrators. Interviews and focus groups involved 78 participants, including advisory board members, employers, educators, administrators, and technology center students. The evidence addresses readiness, program quality, credentials, workplace learning, employer partnerships, access, and improvement opportunities.

The analysis considered program structure, data quality, workforce alignment, and public access to information. Stakeholder accounts help interpret the quantitative patterns. The study does not estimate causal effects, and repeated references to one dataset are not independent confirmation.

Demand analysis methodology

This section describes how the study measures connections between Oklahoma's high school CTE pathways and employer demand in the selected priority sectors.

What the analysis measures

The unit of analysis is the pathway, CareerTech's program of study. Each pathway is mapped to the occupations it prepares students for, and those occupations are tested for employer demand, a sustainable wage, and membership in a priority sector. Results weight each pathway by its concentrations in SY 2024–25; SY 2022–23 and SY 2023–24 are used for trend.

The analysis is descriptive. It reports what students enroll in and which occupations those pathways prepare them for. It does not observe whether any student completed a pathway or entered an occupation, and it cannot support a claim that a pathway caused an employment or earnings outcome. It is set at state and regional level and does not assess any district, technology center, or program.

Data

The analysis draws on the sources in Table D.2. Student activity data follow CareerTech's definitions and coding rules.[9]

Table D.2 Data sources

Source	What it provides	Period
Oklahoma CareerTech student activity data	Concentrator counts by pathway, statewide and for each of 371 reporting sites (342 school districts and 29 technology centers)	SY 2022–23 to SY 2024–25
CareerTech instructional framework documents	The state programs listed under each pathway, with the CIP and SOC codes CareerTech assigns to each	2025–26 and 2026–27
NCES CIP 2020 to SOC 2018 crosswalk	The occupations associated with each instructional program code	Current
Lightcast occupation tables	Employment, annual openings, median hourly wage and typical entry education for every occupation, in each of nine geographies	2024 base; 2024–2029 projections
Lightcast staffing patterns	The share of each occupation's statewide employment in each priority sector's industries	Current
Oklahoma Department of Commerce, Quality Jobs Program	The sustainable-wage threshold	2026
Oklahoma Employment Security Commission, Critical Occupations	The state's list of 100 priority occupations, used for comparison	2022–2032

[9] Oklahoma Department of Career and Technology Education, data definitions and coding rules provided to Insightful Education Solutions, September 2026.

Source	What it provides	Period
CareerTech technology center service areas; county-to-region assignment	The counties each center serves; the workforce region of each of Oklahoma's 77 counties	Current

Lightcast data are the Q3 2026 release, QCEW Employees class of worker.

Priority sectors and the occupations that count

The six priority sectors — Aerospace and Defense, Agribusiness, Energy, Health, Manufacturing, and Transportation and Logistics — were named by the State Chamber. Insightful defined each in industry (NAICS) terms, anchored to the Oklahoma Department of Commerce's industry sectors, and the Chamber reviewed and approved the definitions. Sectors share industries by design: petroleum refining belongs to both Energy and Manufacturing, aircraft manufacturing to both Aerospace and Defense and Manufacturing.

An occupation is Core to a sector when at least 25 percent of its statewide employment is in that sector's industries, measured from a Lightcast staffing-pattern report for each sector; below that share it is Support. Core status is set once statewide and applied in every geography, because sub-state staffing data are sparse and heavily suppressed. The test identifies occupations distinctive to a sector, so a trade employed across all six sectors, such as electricians, plumbers and maintenance workers, registers as Support in each rather than Core to any. Support status describes where an occupation's employment concentrates, not how much a sector depends on it.

The sustainable-wage threshold is $21.18 an hour: Oklahoma's 2026 Quality Jobs Program threshold of $44,062 a year, the highest wage the program requires in any county, divided by 2,080 hours.[10] The State Chamber Research Foundation selected it as a standard familiar to both business and government. It marks the wage at which the state treats a job as worth incentivizing, not what a household needs to meet basic costs. The threshold is applied to each occupation's median hourly wage in the geography reported. A median describes the typical worker rather than a new entrant, so an occupation that clears the threshold may not pay it at hire. One threshold applies in every geography, so clearing it is a weaker signal of job quality in the Oklahoma City and Tulsa areas, where wages run higher.

Employer demand is measured as average annual openings over 2024–2029, which combine openings from growth and from workers leaving an occupation.[11] Each occupation carries Lightcast's typical entry education. Sub-baccalaureate occupations are those typically entered with no formal credential, a high school diploma, some college, a postsecondary nondegree award, or an associate degree.

[10] Oklahoma Department of Commerce, Quality Jobs Program Guidelines (see note 3).

[11] Lightcast occupation tables, Q3 2026 data set, release 2026.3 (see note 1).

Linking pathways to occupations

CareerTech publishes, for each instructional division, the state programs under each pathway and the CIP and SOC codes it assigns to each.[12] These documents are the primary source for the crosswalk. Each CIP code is converted to occupations through the federal CIP-to-SOC crosswalk at the six-digit code,[13] and each SOC code CareerTech lists is added directly. Forty-one pathways are mapped this way.

Where CareerTech's coding yields fewer than five occupations with an Oklahoma wage, occupations from the pathway's published plan of study are added, so that a short list does not decide the result; twelve pathways are supplemented this way. Agricultural Education publishes no program codes, so its eight pathways are mapped from their plans of study, as are exploratory pathways and eight small pathways with no CareerTech program table. Two pre-occupational pathways, which precede a choice of program, are not mapped to any occupation; they remain in the population and count as not aligned.

The crosswalk contains 666 pathway-occupation pairs covering 392 occupations, 338 of which carry an Oklahoma median wage. CareerTech's coding is used as published.[14] The framework documents describe technology center programs; comprehensive high schools report to the same pathways through a separate course table, so the mapping reflects the technology center version of each pathway. Technology centers account for about nine in ten concentrations.

The alignment test

A pathway is aligned to a priority sector in a geography when two conditions hold:

(1) At least one occupation it prepares students for is Core to a priority sector, has 100 or more annual openings statewide, and has a median wage of $21.18 or more in that geography.

(2) At least 10 percent of the pathway's sustainable-wage openings statewide, meaning annual openings in its occupations that pay $21.18 or more, are in occupations Core to a priority sector.

The first condition asks whether a qualifying occupation exists; the second, whether it is a material part of what the pathway prepares students for. Results are identical for any share between about 4 and 15 percent, because pathways' priority-sector shares cluster at zero or well above 15 percent.

A second measure, aligned at sub-baccalaureate entry, counts only sub-baccalaureate occupations toward both conditions: at least one sub-baccalaureate Core occupation with 100 or more annual openings statewide must pay $21.18 or more locally, and sub-baccalaureate Core occupations must account for at least 10 percent of the pathway's sustainable-wage openings statewide. It identifies

[12] Oklahoma Department of Career and Technology Education: Trade and Industrial Education, "Instructional Programs" (2026-27); Business, Marketing and Information Technology Education, "BMITE Sequence of Courses" (FY26); STEM, "STEM Cluster Sequence of Courses" (2025-26); Family and Consumer Sciences Education, "FCS Master Sequence of Courses"; Health Science Education, "Instructional Framework Guide" (2026-27), https://oklahoma.gov/careertech/educators/, accessed September 11, 2026.

[13] National Center for Education Statistics, Crosswalk: CIP 2020 to SOC 2018 (Washington, DC: U.S. Department of Education).

[14] The full crosswalk, with its sources and each coding decision, is available from Insightful Education Solutions.

pathways whose priority-sector occupations a secondary graduate could enter without a four-year degree. Its results are identical for any share between about 9 and 15 percent.

The first condition uses each geography's own wages and is tested separately in every geography, so a pathway aligned statewide can fall short in a region. The Core tier and the 10 percent share are set statewide and applied everywhere.

The findings apply the conditions in sequence to show what each removes: an occupation with at least 100 annual openings statewide; paying $21.18 or more; Core to a priority sector; the 10 percent share; and sub-baccalaureate entry. They also report each pathway against the Oklahoma Employment Security Commission's list of 100 Critical Occupations, the state's other published statement of occupational priority, as the share of the pathway's openings in occupations on the list.[15] The list names occupations rather than industries, so it counts occupations the sector test does not.

Supporting measures

Wage depth. Wage depth is the share of a pathway's annual openings in occupations that pay $21.18 or more in the geography reported. It is computed over every occupation the pathway prepares students for that carries a median wage there, regardless of sector, and weighted by openings rather than by counting occupations. A second version counts only openings that are both sustainable-wage and Core to a priority sector. Occupations with suppressed employment in a geography are left out of that geography. Aggregate figures weight each pathway by its concentrations.

Destination categories. Each enrolling pathway is placed in one of five categories, tested in the order shown in Table D.3, using shares of the pathway's annual openings over the same occupations as wage depth.

Table D.3 Pathway destination categories

Category	Rule
1. Aligned to a priority sector	Meets the alignment test
2. No occupation mapped	Pre-occupational pathway
3. Most occupations require a bachelor's degree or higher	At least half of openings are in occupations typically entered with a bachelor's degree or higher
4. Most openings pay below $21.18	Fewer than half of openings pay $21.18 or more
5. Most openings pay above $21.18, outside the priority sectors	At least half of openings pay $21.18 or more, and the pathway does not meet the alignment test

A pathway is placed in the first category whose rule it meets.

Sector demand and activity. Sector results set each sector's sustainable-wage demand, the annual openings in its Core occupations that pay $21.18 or more, beside the pathways and concentrations preparing students for it. A pathway counts toward a sector when at least 10 percent of its sustainable-wage openings are Core to that sector; the sub-baccalaureate version counts only sub-

[15] Oklahoma Employment Security Commission, "Oklahoma's 100 Critical Occupations (2022–2032)" (see note 8). Its 100 titles correspond to 97 occupation codes in the Lightcast data.

baccalaureate Core openings toward that share. A pathway can count toward more than one sector, and sectors share industries, so sector figures do not sum to a state total.

Unserved occupations. An occupation is unserved when it is Core to a priority sector, pays $21.18 or more, and no pathway in the statewide crosswalk prepares students for it; exploratory pathways are not counted. Unserved occupations are split by typical entry education, and sub-baccalaureate occupations are further marked by entry route: direct entry from training or a high school credential, or promotion from a related occupation. A regional version measures each region against only the pathways that enroll students there.

Counting and geography

The alignment figures count concentrators, students enrolled in three or more credits in a single CTE pathway, in CareerTech's definition. A student concentrating in two pathways is counted in each, so concentrations do not represent unique students.[16]

CareerTech masks any count below ten. Masked cells are counted as zero, so every count is a lower bound. Statewide figures come from CareerTech's state-level table, where masking affects about 0.1 percent of concentrations; the SY 2024–25 statewide base is 24,491 concentrations, against CareerTech's complete total of 24,523. Regional figures come from the site-level table, where masking affects about 7 percent of concentrations, mostly in small rural districts. Regional Agribusiness activity is not reported because masking removes most of it.

Results cover nine geographies: the state, six historical workforce regions, and the Oklahoma City and Tulsa metropolitan statistical areas. The six regions precede two consolidations of the state's workforce areas, which leave four. Occupation data were obtained separately for each geography and checked against the county assignments. The historical regions are retained to provide a consistent study geography.[17,18]

For the demand analysis, a school district's activity is assigned to the county of its district office. A technology center's full count is credited to every county in its service area, including partially served counties, and to each region and metropolitan area containing those counties. More than half of the 29 centers serve counties in more than one region. Regional counts therefore describe activity associated with a service area, rather than unduplicated activity by student residence, and do not sum to the state. Percentages describe this allocated activity and should not be assumed to equal the shares among residents of a region.

[16] Oklahoma Department of Career and Technology Education, "CareerTech Dictionary" (see note 2).

[17] Metropolitan areas follow federal delineations: Oklahoma City (CBSA 36420: Canadian, Cleveland, Grady, Lincoln, Logan, McClain and Oklahoma counties) and Tulsa (CBSA 46140: Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa and Wagoner counties).

[18] Oklahoma Office of Workforce Development, "Local Workforce Development Boards" (see note 6).

Appendix E. Post-high school transitions, 2022–23 to 2024–25

Table E.1 Reported post-high school transitions by type

Transition Type	SY 2022–23	SY 2023–24	SY 2024–25
Continuing Education	7,323	7,700	8,400
Employed Not Related to Program	836	748	899
Employed Related to Cluster	201	265	342
Employed Related to Program	2,683	3,127	3,246
Military	220	279	342
Not in Labor Force	228	203	203
Status Unknown	554	654	675
Unemployed but Seeking	267	355	434
Total	**12,312**	**13,331**	**14,541**

Totals are undercounts due to suppression and data collection methodology. Counts reflect LEA-reported secondary CTE concentrators. Information is collected by district instructors contacting students directly, not by CareerTech. Timing: 6 months after graduation (secondary 12th graders) or 6 months after program completion (technology centers). Postsecondary institutions and systems are not queried directly; all follow-up flows from the district and instructor level. Source: Oklahoma Department of Career and Technology Education (CareerTech) student activity data. Related discussion appears in the thematic chapters of this report.

Appendix F. Education administrator survey responses

The online survey of education administrators drew 38 responses: 20 educators and administrators from school districts (K-12) and 18 technology center administrators. The table summarizes results across all nine survey areas and notes where K-12 and technology center responses differed.

Table F.1 Educator survey results by survey area

Survey area	Result
Top indicators of student readiness (ranked)	1. Completed all required general education courses; 2. Demonstrates soft skills; 3. Completed all required CTE pathway courses
Attitudes and perceptions about CTE	100% see CTE as a pathway into college; 97% agree pathways should be aligned with high-demand, sustainable-wage occupations; 84% are concerned there are not enough seats
Importance of student outcomes	90% or more rated every outcome area important or very important (broad consensus)
Top strengths (K-12 and technology centers agree)	Pathways aligned with high-skill, high-demand, high-wage jobs; helping students achieve positive outcomes after high school
Most challenging issues	K-12: teachers and seats (tied, 50%). Technology centers: enough seats (67%). Technology center funding access: 44% very challenging (94% at least somewhat)
Sense of influence	Most influence: offering or changing a pathway (68%). Least influence: ensuring enough seats (32%). One in three report little or no influence over seat availability
Business outreach — approached “frequently”	K-12: 10%; technology centers: 22%. Most in both groups were approached only occasionally
Data access difficulty (somewhat or very difficult)	Local data: 74%; regional: 66%; state: 60%. Local data access hit K-12 hardest: 25% “very difficult” vs. 6% at technology centers
Top support type wanted	K-12: employer relationships (75%); technology centers: work-based learning placement (78%). Both groups also rank the other item at 67–70%; five support needs were cited by 50% or more

Source: Educator Online Survey Summary. Percentages are as reported in the survey summary. Related discussion appears in the thematic chapters of this report.

Appendix G. Supporting tables

These tables provide detail behind the thematic chapters. Statewide and site-level files differ in suppression, and regional allocations require the qualifications attached to each table. Completion ratios describe aggregate reported activity, not individual progression.

Table G.1 Three pathways offered in both delivery settings

Pathway	Channel	Concentrators	Completers	Completion ratio
Science and Mathematics	Technology centers	2,454	2,346	95.6%
Science and Mathematics	School districts	115	38	33.0%
Web and Digital Communications	Technology centers	863	794	92.0%
Web and Digital Communications	School districts	348	50	14.4%
Restaurants & Food/Beverage Services	Technology centers	525	503	95.8%
Restaurants & Food/Beverage Services	School districts	117	<10	n/r
All three pathways	**Technology centers**	**3,842**	**3,643**	**94.8%**
All three pathways	**School districts**	**580**	**88**	**15.2%**

The combined district ratio treats the suppressed Restaurants and Food/Beverage Services completer count as zero. Matching pathway names does not control for student selection, program duration, delivery format, or reporting differences. Source: CareerTech site-level data, 2024–25.

Table G.2 Advanced workplace experiences by program area

Program area	Internship	Pre-Appr	Appr.	OJT	Total	Difference	Experiences per 100
Education & Training	68	0	0	13	81	−1	54
Energy & Power	<10	0	0	14	14	−2	34
Hospitality & Tourism	13	0	0	103	116	−4	15
Law, Public Safety & Corrections	20	0	10	48	78	−2	13
Marketing, Sales & Service	15	0	0	27	42	0	11
Architecture & Construction	44	<10	<10	109	153	−5	6
Human Services	35	20	<10	60	115	−2	5
Transportation & Logistics	41	0	<10	84	125	−1	5
Health Science	60	0	0	64	124	−1	3
Manufacturing (advanced)	23	0	<10	44	67	0	3
Agriculture, Food & Nat. Resources	<10	0	0	17	17	0	2
Arts, A/V Tech & Communications	<10	0	<10	12	12	−1	2
Information Technology	<10	0	<10	15	15	−3	<1
Business, Mgmt & Administration	<10	0	<10	<10	<10	–	<1
STEM	<10	0	0	<10	<10	–	<1
Finance	0	0	0	0	0	0	0
Statewide total	**319**	**20**	**10**	**610**	**959**	**−22**	**3.9**

“Experiences per 100” uses concentrations as the denominator. “Difference” is completer experience counts minus concentrator experience counts. Counts are experiences, not necessarily unique students. Suppressed values are excluded from totals, so the total is lower than the statewide count in Table 7. “Difference” reproduces the source comparison of experience counts by activity category; it is not a count of students who did not complete. Source: CareerTech statewide program-area activity, 2024–25.

Table G.3 Selected occupations with no mapped CTE pathway

Occupation	Annual openings	Median hourly	Sector	Entry route
First-line supervisors of production and operating workers	1,030	$33.66	Manufacturing	Promotion
Inspectors, testers, sorters, samplers	996	$23.86	Manufacturing	Direct entry
First-line supervisors of transportation workers	869	$29.46	Transportation and Logistics	Promotion
Billing and posting clerks	487	$21.69	Health	Direct entry
Service unit operators, oil and gas	301	$27.25	Energy	Direct entry

These occupations meet the sector, wage, and education criteria but have no mapped non-exploratory pathway. Some are typically reached through promotion. “Direct entry” does not remove additional licensing or training requirements. Source: Lightcast occupation tables, Q3 2026; pathway-to-occupation crosswalk.

Table G.4 Regional occupational alignment

Geography	Concentrations	Aligned	Share of openings paying $21.18+
Oklahoma (statewide)	24,491	40.1%	69%
Central	12,873	36.5%	71%
Green Country	9,818	42.3%	69%
Northeast	5,648	44.9%	57%
South Central	4,238	36.0%	55%
Southern	3,482	38.0%	61%
Western	6,358	30.2%	66%
Oklahoma City MSA	10,924	35.7%	71%
Tulsa MSA	8,110	43.4%	70%

The aligned column uses occupations typically entered without a four-year degree. Concentrations are assigned by technology center service area and can appear in more than one region. The final column measures associated openings with median wages at or above the benchmark, using local wages. Source: CareerTech activity joined to Lightcast occupation tables, Q3 2026.

Table G.5 Priority sectors used by the Chamber and the Department of Commerce

Sector	State Chamber priority sectors (used in this study)	Department of Commerce industry sectors
Aerospace and defense	Yes	Yes
Agribusiness	Yes	Yes
Energy	Yes	Yes, as traditional and as renewable energy
Manufacturing	Yes	Yes
Health	Yes	—
Transportation and logistics	Yes	—
Automotive	—	Yes
Bioscience	—	Yes
IT and cybersecurity	—	Yes
Advanced air mobility and unmanned systems	—	Yes
Film and music	—	Yes

The lists serve different institutional purposes. A dash denotes a sector not separately named in that list; it does not establish that the agency considers the activity unimportant. Source: Oklahoma State Chamber; Oklahoma Department of Commerce industry sectors.

Table G.6 Partnership barriers described by participants

Barrier	Employers	Educators and administrators	Students
No formal role in curriculum design	Named	Named	–
Credential value not validated with industry	Named	Named	Related
Under-18 liability, insurance, and safety limits on placements	Named	Named	Named
No one responsible for brokering partnerships	Named	Named	Related
Program capacity and wait lists	Named	Named	Named
Transportation and scheduling	Named	Named	Named
Foundational and employability skills	Named	Named	–
Outcome data not available	Named	Named	–

Entries summarize themes in the participating groups, not population prevalence. “Related” indicates that students described effects associated with a condition. Source: employer, educator, administrator, and student surveys, focus groups, and interviews.

Endnotes

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