

Identifying Classroom Training Opportunities in High-Growth, High-Demand Industries

All workforce development and training programs operate within the context of the regional economy, and each regional labor market has a unique blend of industries, employers, and occupations that compose the local economy. As economic conditions change, Boards monitor current and emerging trends to glean information that will give job seekers and workers the best opportunity to secure and retain jobs in high-growth, high-demand industries. Local Workforce Development Boards (Boards) prioritize and leverage classroom-training investments to stay in step with evolving business practices and technological innovations within industries because increased worker productivity fuels the economic prosperity of businesses, families, and communities in Texas.

The following process is intended as a suggested approach Boards may use to identify high-growth, high-demand industries and occupational skill sets. It is designed to be integrated across all funding streams and responsive to the entire spectrum of training needs that may occur in developing and advancing the skills of both incumbent workers and job seekers in the workforce pipeline. The classroom-training list will assist Boards in performing the following critical activities:

- Providing labor market planning guidance for key stakeholders and policymakers, including forming industry partnerships
- Providing career planning guidance to customers that employs the concept of transferability of skills, including identified opportunities for career progressions
- Making informed decisions regarding classroom training investments in the occupational skill sets employers need

Suggested Methodology Reference: [Connecting the Dots, Chapter 7](#)

NOTE: The classroom-training list created by this process must NOT be used to exclude specific populations of workers or job seekers from workforce services or training opportunities. Additionally, it is NOT to be used for eligibility or co-enrollment determinations in workforce programs or applied improperly as exclusionary criteria for specific workforce or support services.

Step 1: Conduct an Industry-Sector Analysis
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To prepare for this process, a Board must use its analysis of local demographics, geographic labor market, economic base, industrial structure, historical employment trends, current economic conditions, and labor force characteristics. An environmental scan, or external assessment, includes an economic profile of factors critical to the local community, including rural versus urban conditions, and precedes the Board's analysis of high-demand industries and growing occupations, industrial trends, workforce supply estimates, and skill-level requirements for occupations in high demand.

The industry-sector analysis will provide evidence of a Board’s priorities based upon a data-driven review of:

- regional labor market demand by size of industry, total employment, number of employers, and size of employers in each industry;
- key industries with large potential for job openings due to turnover and separations;
- changes in long-term industry trends that indicate increases or decreases in historical employment in terms of absolute change in the number of jobs added plus the percentage change for those industries adding jobs at the fastest rate;
- high-growth industrial projections for those industries adding the most jobs or growing at the fastest rate;
- industries with significant numbers of current and projected job openings;
- industries with regional comparative advantages;
- expected outcomes relating to local economic development efforts; and
- similar analyses, including regionally defined industry concentrations or industry-sector collaborations.

Step 1 can be achieved using SOCRATES. The tools and data in SOCRATES allow Boards to conduct industry analysis and achieve the desired list of targeted industries.

To identify local high-growth, high-demand industries, the analysis must be based upon the North American Industrial Classification System (NAICS), an industrial coding system adopted by the U.S. Department of Labor Bureau of Labor Statistics. High-growth, high-demand industries can be identified through industry evaluation models (such as the INDEVAL module in SOCRATES), shift-share analyses, and other methods to rank and select industries according to their absolute and percentage growth potential.

Suggested Tool: [SOCRATES](#)

The industry-sector analysis will produce a set of *key industry sectors* (by four-digit NAICS codes) that:

- offer the greatest employment demand and the best growth prospects; and
- demonstrate the most critical labor shortages or skill needs in businesses in key industries or industry concentrations within the local economy.

Step 2: Identify Staffing Patterns Within and Across Industry Sectors

The second step in the planning process is to determine staffing patterns within key industries—i.e., relationships between key industries and those occupations or jobs that make up those local industries. The analysis of the occupational composition of industries may include profiles of occupations that are critical or in short supply, but are not in a high-growth industry. A Board must consider occupational projections and job-quality assessments in its analysis.

It also is important for Boards to evaluate current economic development efforts when expanding their focus to include new occupations. For example, some manufacturing industries may be declining in employment size and may not meet the criteria for high growth. However, those sectors may need robotics technicians, millwrights, or production equipment repairers. Therefore, production or other technical occupations in manufacturing may be determined as critical to the local economy.

The analysis should rely on an industry-occupation matrix or staffing pattern, and include other high-demand

occupations that may be new, critical, or emerging. For example, occupations with high-replacement demand—a large number of job openings—may be included, even if the industry sector in which the occupation is found is not growing at a high rate. Occupations with such a large employment demand may be important to the local economy. Emerging and evolving occupations within industries that may not be associated yet with high-growth rates may meet Board-specific criteria for high-employment demand potential or may be critical to the local industrial base.

Step 2 can be achieved through SOCRATES. Using SOCRATES, Boards can identify occupations within each target industry via staffing patterns, as described herein. Also, Boards can identify unique characteristics (e.g., job growth parameters, wage thresholds, skill transferability, training times) to filter out those occupations for which they believe training should occur in their regions. LWDA industry projections will be sent to Boards by May 20, 2005, and LWDA occupational projections will be sent to Boards by May 31, 2005. Although several Labor Market & Career Information (LMCI) Department emerging & evolving occupations studies are still applicable, there is currently no additional emerging and evolving occupations research being conducted within TWC. Boards are encouraged to look elsewhere for such information. Each Board will define what constitutes “high-demand, high-growth.” The definition of high-growth, high-demand will not be uniform across all regions.

Exceptions to the labor market analysis process detailed herein are instances in which the occupations do not meet the criteria for high demand in terms of the number of job openings they offer. Training solutions to address low-demand situations may be offered to employers through specially designed customized or on-the-job training options available in the local workforce development area (workforce area).

The occupations on the list of classroom training opportunities should be ranked and selected by projected absolute and percentage growth, and by projected job openings due to new jobs added versus replacement demand. In order to identify occupations within high-growth industries, the Standard Occupational Classification (SOC) system must be used, except for new, emerging, and evolving occupations not yet coded in SOC. Emerging and evolving occupations may be coded as “E&E” in place of the SOC code on the occupational list, and it is recommended that the Board incorporate local wisdom about collaboration with community partners to create training programs for these new occupations.

Suggested Tool: [SOCRATES](#)

The occupational analysis will yield a set of *high-growth, high-demand occupations* (by SOC code) including occupations with one or more of the following characteristics:

- Dominance within a high-growth, high-demand industry
- Identification as an emerging and evolving high-demand occupation
- Use as locally customized, business-defined titles for specific job duties
- Existence across multiple key industries
- Determination of high-replacement demand and large numbers of job openings
- Designation within Board-specific occupational and growth criteria including, but not limited to, percent change and absolute change in projected job growth

Boards can conduct SOC-based occupational analysis using SOCRATES and the occupational projections. This step is similar to prior years.

Step 3: Conduct a Detailed Occupational Analysis To Identify Training Programs

A detailed analysis of high-growth, high-demand occupations necessarily includes a review of factors, such as:

- The number of projected job openings (available through LMCI projections)
- Projected growth rates (available through LMCI projections)
- Current labor availability in the workforce and educational pipeline (available through Texas Industry Profiles/Labor Availability Estimator on an industry-by-industry basis. Boards must determine how to combine or highlight this data for their key growth industries.)
- Planned career progressions (Boards may use LMCI’s *Pathways to Personal Independence* as a model, but each Board will have to determine how to apply its list of occupations to a career lattice concept.)
- Hiring requirements and prerequisites for performing job duties (The O*NET skills list serves as an excellent skills summary that can be validated by regional employers.)
- Length of training (available in SOCRATES)
- Availability of training programs (available in the TWC Eligible Training Provider Certification System (ETPS). Occupations in ETPS are not listed by SOC code. Therefore, Boards must translate their occupational lists into titles that can be cross-referenced with ETPS. SOCRATES occupational narratives have a list of training programs associated with each SOC occupation.)
- Transferability of skill sets (Transferable *occupations* are readily identified as those that are employed in many different industries; transferable *skills* are different. Boards may analyze the transferability of skill sets by listing high-growth, high-demand occupations, building a matrix showing O*NET skills for each, and then identifying similarities or patterns across occupations as “transferable skills sets.”)
- On-the-job and customized training alternatives to classroom training

To identify the training programs associated with the high-growth, high-demand occupations, the Classification of Instructional Programs (CIP) codes and related documents are used to match curricula offered by Eligible Training Providers (ETPs) found in ETPS. The associated CIP codes for training programs in high-demand occupations must be explicit in occupational analysis, and may include training opportunities for customers willing to relocate to other areas of the state. An SOC to CIP crosswalk showing the relationship between occupations and training programs, is recommended as a useful tool to document this connection.

Occupations serve as a common language to facilitate communication between education, training providers, and employers. Occupations help narrow down and group those occupationally specific skill sets practiced by individuals in common industry settings.

An SOC-CIP crosswalk is available in SOCRATES that shows the relationship between occupations and training programs.

Today, when a vast majority of employers refer to “skills,” they mean within a specific occupation or job. And, when educators refer to “training,” they think of learning objectives and competency statements, rather than skills. It is the concept of an occupation that provides the vehicle for communication about skill sets that employers need in productive workers.

A Board must identify training programs associated with each occupation, and then examine where the training programs are associated with more than one occupation, which may suggest the existence of transferable skills. Using the concept of an “occupation” as a label for a collective set of skills, a Board can identify whether a skill is transferable across industries by evaluating what other occupations rely on the same knowledge or skill, and then determine if other industries also employ those occupations. A Board must catalogue employer hiring requirements and needs and cross-reference them with the training programs’ curricula.

Boards must develop career planning guidance that demonstrates career ladder and career lattice opportunities for customers, and can also be used to select classroom training opportunities and make informed choices in careers and career pathways. Grouping similar skill sets enables Boards to guide customers on how to capitalize on transferable skill sets to build career pathways and move to more highly skilled occupations within or between high-growth industries

The LMCI publication, *Pathways to Personal Independence*, provides an example of the approach that may be used to create planned career pathways based on transferable skill sets. Moreover, the publication’s approach to transferable skills requires the identification of several entry-level occupations. Using tools such as O*NET, which is fully aligned with SOC, is a starting point for cataloging the skill requirements of selected occupations in high-growth, high-demand industries.

Suggested Tools: **SOCRATES Occupational Profiles**
<http://socrates.cdr.state.tx.us/iSocrates/Files/SOC2CIP.xls>
O*NET Online
iOSCAR

A detailed occupational analysis will result in a matrix that *aligns selected occupations for classroom training with CIP codes and ETPs* in ETPS. The occupational analysis will result in the identification of classroom training programs that most closely match skill sets of high-growth, high-demand occupations, and that demonstrate an understanding of the characteristics of the occupations, including hiring requirements of regional employers and common occupational skill sets. If a Board uses SOCRATES, it may add the CIP codes and training program titles into the “Local Wisdom and Other Rationale” narrative field on the final occupations list.

“Skills” is a concept unique to occupations. Training programs and curricula are crafted around “learning objectives” and “competencies.” Because there is no generic crosswalk between training program learning objectives and occupational skill sets, Boards cannot assume that occupations and training programs are aligned at the skill set level. Boards must work with employers and training providers to ensure that skill sets are aligned with learning objectives.

Step 4: Identify Local Employers and Stakeholders To Engage Them in Skill-Level Validation

Sound labor market planning engages multiple stakeholders, including employers and training partners. Additional community audits, regional anecdotal knowledge, industry association input, and employer feedback augment and validate a Board’s analysis of local labor market information. Boards must rely on a combination of data-driven resources complemented with local wisdom in their labor market analyses. Boards gain knowledge regarding the essential historical background and rationale behind recent downturns, and then can respond to changes in general economic conditions and skill gaps that employers are facing.

The matrix in Step 3 will allow Boards to identify opportunities for collaboration with ETPs and create workforce solutions to address existing and emerging skill gaps in high-growth, high-demand occupations.

Local planning consensus activities may include the following:

- Validate and update high-growth, high-demand occupations with input from:
 - Business Services Units;
 - employers;
 - local labor market focus groups;
 - consensus committees;
 - chambers of commerce;
 - labor representatives;
 - economic development partners;
 - community colleges;
 - industry associations; and
 - other sources of local, anecdotal labor market information.
- Publish the Board’s current labor market analysis and classroom training priorities for public comment, assessing and incorporating the stakeholder feedback received.
- Evaluate the Board’s success rate—in the past year—in placing customers into occupations for which they received classroom training. The Board may monitor such outcomes by creating a method or procedure for case managers to collect local occupational placement information at exit or during follow-up. Case management notes or other files, in addition to the optional occupational placement field in The Workforce Information System of Texas (TWIST), may be used for this evaluation.

It is highly recommended that Boards collaborate with employers to validate the training curricula being offered by a given provider before contracting with that provider.

Industry-sector employers, especially business-led associations of industries, are necessary partners in validating occupational skill requirements, classroom-training lists, curriculum learning objectives, and other labor market analyses. The workforce area’s economic profile is a good starting point for discussions with stakeholders. This profile should include the analysis of high-demand industries and growing occupations, workforce supply estimates, and occupational skill-level requirements for high-demand occupations, plus a profile of occupational skill-gap issues critical to the local economy. The concept of an occupation allows educators and employers to communicate about skill levels; it is the common ground that allows for collaboration between these parties.

In addition to the process detailed herein, Boards also must consider regionally customized, on-the-job and apprenticeship training options that can be negotiated with local training providers and employers as an alternative to classroom training—all of which complement the palette of available training opportunities.

In order to draw distinctions between training alternatives (i.e., classroom training versus on-the-job training versus customized training), stakeholders must understand which alternatives may be offered to employers as solutions to staffing situations where the high-demand, high-growth occupational criteria are not met.

Suggested Tools: [County Narrative Profiles](#)
 [Texas Industry Profiles Labor Availability Estimator](#)

Boards must produce a narrative description of the skill-level validation results with local employers and the value added to the labor market plan that was achieved through the validation process. This narrative must demonstrate how the Board engaged, or plans to engage, local stakeholders in the continuous planning process, and must describe the ongoing mechanisms for incorporating local wisdom into the planning process. This approach allows Boards to document ongoing changes made to the labor market planning process based upon employer input and local wisdom.

The result should be a labor market plan for conducting classroom training that is integrated across all funding streams and facilitates informed decisions regarding classroom training investments in the occupational skill sets employers need. It also will serve as a guidepost in data-driven career planning that is responsive to the entire spectrum of training needs that may occur in developing and advancing the skills of incumbent workers and job seekers in the workforce pipeline, and that provides comprehensive career planning guidance to customers including information on skill transferability and career progression.