

# RESEARCH-TO-PRACTICE BRIEF: USING LABOR MARKET PROJECTIONS FOR SUCCESSFUL TRANSITION PLANNING

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Employment rates and post-school transition outcomes for individuals with disabilities remain alarmingly low compared to peers without disabilities. Transition plans often focus on skills associated with employment opportunities that are immediately available to the individual with a disability. We contend that transition plans must be developed with specific attention to projected labor market needs to ensure that we are preparing students with disabilities for long-term success. This research brief describes how the results of an in-depth labor market analysis can be used to develop strong transition plans that prepare students for careers that will last far into the future.

## BACKGROUND

Employment outcomes for individuals with disabilities continue to be far below that of individuals without disabilities (Bureau of Labor Statistics [BLS], 2018). Approximately 21% of individuals with disabilities are currently participating in the workforce versus 68% of individuals without disabilities (BLS, 2018). Unemployment rates for people with disabilities are much higher than for people without disabilities at 7.7% and 3.3%, respectively (BLS, 2018). Although improvements have been made in transition planning for students with disabilities with increased opportunities for postsecondary education and vocational training (BLS, 2018), employment rates suggest the need to continue to focus on transition planning that enhances the likelihood of post-school employment.

Individualized transition plans (ITPs) are required under the Individuals With Disabilities Education Act (IDEA, 2004) beginning prior to 16 years of age. According to federal regulations, these plans must be individualized, strengths- and interests-based, and offer opportunities for individuals to develop skills that can be applied to work and community living. As with many IDEA requirements, the interpretation and application of such policies directly relate to whether the intended outcomes are met (Turnbull, Turnbull, & Cooper, 2018).

There are a number of guidance documents that support the interpretation and application of ITP policies, such as the *Taxonomy for Transition Programming 2.0* (Kohler, Gothberg, Fowler, & Coyle, 2016), which includes mention of matching career and postsecondary aspirations to current labor market

availability. An example of this includes an Office of Special Education and Rehabilitative Services (2017) guidance document, which suggests linking “educational instruction, workforce development, and human services” (p. 6) to trends in the labor market and identifies the National Career Pathways Network as a resource. This advice supports professionals in considering the labor market. However, there is a lack of direct and specific guidance on how individuals with disabilities, professionals, and support networks locate and apply real-time market analysis to intervention planning. Specifically, education professionals may have difficulty finding the time and resources to do the research necessary to effectively consider projected trends in the job market. If individuals with disabilities, education professionals (i.e. school psychologists, counselors, and special educators) and parents have access to detailed labor market projections, they may be able to more effectively plan for long-term sustainable employment opportunities.

This study addresses the need for more specific guidance on the use of a detailed labor market analysis to develop ITPs that promote sustainable careers for individuals with disabilities. The specific research questions were: (a) What are the current 10-year labor market projections for Orange County, CA, the entire State of California, and the United States? and (b) How can labor market projections be used by individuals with disabilities, education professionals, and parents for planning ITPs that align with labor market trends? This current brief provides a description of the labor market analysis and examples of application to ITPs.

## LABOR MARKET NEEDS ANALYSIS

As individuals with disabilities, educators, and families prepare for a career path, it is critical that they are aware of the changing needs of the labor market. Once the team has a sense of the current labor market, data may be obtained that allow for projections of future labor market needs, so that curriculum and

intervention programs may be developed with these changing needs in mind. Labor market needs fall into four key areas: (a) necessary skills, (b) high demand skills (based on supply and demand), (c) in-demand jobs, and (d) projected job growth.

## NECESSARY SKILLS

Using labor market data provided by Walrod and Walrod (2018), the top “necessary skills” for current job postings were identified. These skills were categorized by “baseline” skills and “specialized” skills. Baseline skills are the foundational skills that are intangible and transferable, like creativity or good work ethic. Specialized skills are those skills that are somewhat more technical or hybridized and require training, such as sales or computer programming. Specific in-demand skills were prioritized based on the number of job postings that included these skills. The following are considered the top four in-demand baseline skills in the United States based on the number of job postings in which they appeared: (a) communication skills (7,542,240 job postings); (b) teamwork/collaboration (3,765,154 job postings); (c) organizational skills (3,356,446 job postings); and (d) problem solving (2,961,468 job postings). The top four specialized skills in the United States (and associated number of job postings) included: (a) customer service (4,017,926); (b) sales (2,853,731); (c) scheduling (2,797,461); and (d) budgeting (1,850,345).

When looking at state data, the school team may see similar but slightly different trends than in the national information. For example, in California, the following are considered the top four in-demand baseline skills in the United States based on the number of job postings in which they appeared: (a) communication skills (1,115,417 job postings); (b) teamwork/collaboration (588,379 job postings); (c) organizational skills (514,286 job postings); and (d) skills in Microsoft Excel (458,871 job postings). These skills were similar to those in the United States with the exception of the fourth skill, which was listed as

Microsoft Excel rather than problem solving. The top four specialized skills in California (and associated number of job postings) included: (a) customer service (520,617); (b) scheduling (394,635); (c) sales (378,904); and (d) budgeting (272,047). These skills were the same as those in demand in the United States; however, scheduling was prioritized over sales.

For planning purposes, educators may also be interested in comparing national and state data to county specific information. For example, in Orange County, the following are considered the top four in-demand baseline skills in the United States based on the number of job postings in which they appeared: (a) organizational skills (57,043 job postings); (b)

teamwork/collaboration (56,663 job postings); (c) skills in Microsoft Excel (55,759 job postings); and (d) detail-oriented (49,591 job postings). The top four specialized skills in California (and associated number of job postings) included: (a) customer service (61,392); (b) sales (43,627); (c) scheduling (43,450); and (d) budgeting (27,936).

## HIGH DEMAND SKILLS AND TOP QUALIFICATIONS

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today’s workforce. Along with job posting analytics,

**TABLE 1a: High Demand Skills (Supply and Demand): Top Hard Skills**

TOP HARD SKILLS	FREQUENCY IN POSTING	POSTINGS WITH SKILL/ TOTAL POSTINGS (Sep 2016 – Oct 2018)	FREQUENCY IN PROFILES	PROFILES WITH SKILL/ TOTAL PROFILES (2016 – 2018)	DISCREPANCY BETWEEN SUPPLY AND DEMAND
Sales Management	1.52%	1,511,267 / 99,165,791	5.43%	3,438,613 / 63,321,283	-3.91%
Business Development	1.93%	1,918,812 / 99,165,791	4.16%	2,633,154 / 63,321,283	-2.22%
Customer Relationship Management	1.80%	1,783,763 / 99,165,791	3.77%	2,388,516 / 63,321,283	-1.97%
Customer Satisfaction	2.22%	2,199,481 / 99,165,791	3.81%	2,411,713 / 63,321,283	-1.59%
Purchasing	2.28%	2,260,265 / 99,165,791	3.79%	2,402,915 / 63,321,283	-1.52%
Microsoft Access	2.20%	2,182,773 / 99,165,791	3.30%	2,087,467 / 63,321,283	-1.10%
Auditing	1.97%	1,957,951 / 99,165,791	2.92%	1,852,013 / 63,321,283	-0.95%
Accounting	3.94%	3,907,477 / 99,165,791	4.65%	2,945,426 / 63,321,283	-0.71%
Packaging And Labeling	1.40%	1,388,765 / 99,165,791	1.34%	847,243 / 63,321,283	0.06%
Warehousing	2.62%	2,595,927 / 99,165,791	2.26%	1,428,408 / 63,321,283	0.36%
Rehabilitations	1.53%	1,516,218 / 99,165,791	0.75%	477,339 / 63,321,283	0.78%
Pediatrics	1.66%	1,643,138 / 99,165,791	0.74%	468,766 / 63,321,283	0.92%
Food Services	1.80%	1,788,933 / 99,165,791	0.87%	549,200 / 63,321,283	0.94%
Advanced Cardiovascular Life Support	1.64%	1,623,281 / 99,165,791	0.49%	310,322 / 63,321,283	1.15%
Acute Care	1.69%	1,674,853 / 99,165,791	0.45%	284,170 / 63,321,283	1.24%
Surgeries	1.91%	1,891,775 / 99,165,791	0.64%	405,130 / 63,321,283	1.27%
Customer Experience	2.16%	2,146,343 / 99,165,791	0.81%	513,216 / 63,321,283	1.35%
Basic Life Support	2.21%	2,188,024 / 99,165,791	0.80%	504,795 / 63,321,283	1.41%
Merchandising	4.75%	4,711,356 / 99,165,791	3.28%	2,076,805 / 63,321,283	1.47%
Intensive Care Unit	1.81%	1,799,494 / 99,165,791	0.34%	214,357 / 63,321,283	1.48%
Caring For People With Dementia	1.63%	1,616,328 / 99,165,791	0.00%	0 / 63,321,283	1.63%
Home Care	2.19%	2,167,984 / 99,165,791	0.52%	330,440 / 63,321,283	1.66%
Restaurant Operation	3.93%	3,899,326 / 99,165,791	1.96%	1,241,489 / 63,321,283	1.97%
Selling Techniques	5.08%	5,039,659 / 99,165,791	3.06%	1,935,111 / 63,321,283	2.03%
Nursing	5.67%	5,618,683 / 99,165,791	1.58%	1,001,538 / 63,321,283	4.08%

**TABLE 1b: High Demand Skills (Supply and Demand): Top Common Skills**

TOP COMMON SKILLS	FREQUENCY IN POSTING	POSTINGS WITH SKILL/ TOTAL POSTINGS (Sep 2016 – Oct 2018)	FREQUENCY IN PROFILES	PROFILES WITH SKILL/ TOTAL PROFILES (2016 – 2018)	DISCREPANCY BETWEEN SUPPLY AND DEMAND
Microsoft Office	2.26%	2,236,271 / 99,165,791	13.97%	8,846,553 / 63,321,283	-11.72%
Microsoft Excel	4.08%	4,041,905 / 99,165,791	13.25%	8,392,372 / 63,321,283	-9.18%
Leadership	8.88%	8,801,100 / 99,165,791	17.29%	10,946,167 / 63,321,283	-8.41%
Customer Service	14.30%	14,177,192 / 99,165,791	21.99%	13,925,025 / 63,321,283	-7.69%
Research	4.87%	4,832,229 / 99,165,791	11.40%	7,220,113 / 63,321,283	-6.53%
Sales	16.84%	16,698,369 / 99,165,791	19.09%	12,089,255 / 63,321,283	-2.25%
Writing	2.21%	2,191,999 / 99,165,791	4.33%	2,739,097 / 63,321,283	-2.12%
Microsoft Outlook	2.36%	2,343,285 / 99,165,791	4.39%	2,781,396 / 63,321,283	-2.03%
Time Management	2.67%	2,645,460 / 99,165,791	3.90%	2,469,482 / 63,321,283	-1.23%
Information Technology	2.43%	2,409,768 / 99,165,791	3.40%	2,153,975 / 63,321,283	-0.97%
Retail Sales	2.19%	2,170,502 / 99,165,791	2.50%	1,582,241 / 63,321,283	-0.31%
Coordinating	2.85%	2,827,476 / 99,165,791	2.75%	1,742,174 / 63,321,283	0.10%
Operations	10.92%	10,826,515 / 99,165,791	10.16%	6,433,354 / 63,321,283	0.76%
Mentorship	2.45%	2,425,261 / 99,165,791	1.58%	1,002,683 / 63,321,283	0.86%
Presentations	4.63%	4,587,303 / 99,165,791	3.73%	2,362,903 / 63,321,283	0.89%
Decision Making	2.19%	2,169,947 / 99,165,791	0.81%	512,547 / 63,321,283	1.38%
Driving	2.64%	2,621,067 / 99,165,791	0.72%	459,049 / 63,321,283	1.92%
Computer Literacy	3.68%	3,652,236 / 99,165,791	1.32%	837,692 / 63,321,283	2.36%
Problem Solving	6.02%	5,966,575 / 99,165,791	3.63%	2,300,099 / 63,321,283	2.38%
Verbal Communication Skills	2.57%	2,549,748 / 99,165,791	0.16%	101,898 / 63,321,283	2.41%
Management	24.98%	24,767,719 / 99,165,791	22.49%	14,237,887 / 63,321,283	2.49%
Interpersonal Skills	3.90%	3,869,773 / 99,165,791	0.98%	617,908 / 63,321,283	2.93%
Written Communication	4.23%	4,196,558 / 99,165,791	0.54%	341,444 / 63,321,283	3.69%
Innovation	7.44%	7,378,165 / 99,165,791	1.55%	981,363 / 63,321,283	5.89%
Communications	16.61%	16,469,702 / 99,165,791	6.32%	4,002,115 / 63,321,283	10.29%

this comparison leverages a dataset of more than 100 million online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last 3 years. The skills associated with workforce profiles represent workers of all education and experience levels. These skills were categorized by “hard” skills, “common” skills, and top qualifications. The top hard and common skills and the frequency of these skills in potential workers profiles are listed in Tables 1a and 1b. These tables also include columns that reflect the discrepancy between supply and demand. Those skills with negative numbers indicate that there are more people posting that they have that particular skill than there are employers who may be searching for such skills. Those

with high positive numbers indicate that employers are seeking the listed skill but that fewer people have these skills listed in their online profiles.

## IN-DEMAND JOBS

In addition to understanding the necessary skills required to be successful in future careers, it is crucial that educators understand the types of jobs that are currently open and available. Table 2 provides a list of jobs that are actively available in the United States in the last 2 years. Analysis was limited to the active posting of the top 1,000 job titles. Job postings are listed for the United States, as are sample data for state and county regions.

**TABLE 2: In-Demand Jobs**

<b>UNITED STATES</b>		<b>CALIFORNIA</b>		<b>ORANGE COUNTY, CA</b>	
<b>JOB TITLE</b>	<b>AVERAGE ACTIVE (Sep 2016 – Oct 2018)</b>	<b>JOB TITLE</b>	<b>AVERAGE ACTIVE (Sep 2016 – Oct 2018)</b>	<b>JOB TITLE</b>	<b>AVERAGE ACTIVE (Sep 2016 – Oct 2018)</b>
Truck Drivers	737,542	Truck Drivers	31,171	Truck Drivers	1,879
(CDL) Drivers	321,764	Registered Nurses	20,659	Customer Service Representative	1,813
Registered Nurses	238,595	Software Engineers	20,248	Taxi Drivers	1,796
Unknown	179,067	Retail Sales Associates	17,989	Retail Sales Associates	1,712
Retail Sales Associates	157,038	Unknown	16,818	Registered Nurses	1,527
Customer Service Representative	144,324	Customer Service Representative	16,150	Unknown	1,286
Sales Managers	125,316	Taxi Drivers	13,137	Software Engineers	1,163
Sales Representatives	122,241	Sales Managers	13,131	Sales Managers	1,100
Delivery Drivers	112,157	(CDL) Drivers	12,521	Sales Representatives	1,046
Flatbed Drivers	91,939	Sales Representatives	11,831	(CDL) Drivers	780
Software Engineers	81,648	Delivery Drivers	9,987	Delivery Drivers	751
Physicians	75,368	Product Managers	7,924	Administrative Assistants	750
Owner Operators	75,031	Administrative Assistants	7,802	Sales Managers	701
Restaurant Managers	74,608	Sales Managers	7,586	Restaurant Managers	684
Customer Service Associates	73,003	Restaurant Managers	6,922	Project Managers	673
Taxi Drivers	72,746	Project Managers	6,694	Restaurant Crew Team Members	607
Restaurant Crew Team Members	67,152	Customer Service Associates	6,302	Customer Service Associates	588
Sales Managers	55,219	Restaurant Crew Team Members	6,016	Accountants	515
Maintenance Mechanics	52,008	Marketing Managers	5,565	Business Analysts	455
Administrative Assistants	49,328	Physicians	5,275	Account Managers	451
General Managers	47,681	Account Managers	5,025	Product Managers	433
Cooks	45,900	Speech Language Pathologists	4,937	Design Engineers	411
Project Managers	45,365	Accountants	4,920	Marketing Managers	367
Regional Truck Drivers	43,130	Design Engineers	4,881	Bank Tellers	343
English Teachers	27,893	Program Managers	4,482	Security	284

## PROJECTED JOB GROWTH

Projected job growth allows teams to prepare students for occupations that are expected to be in demand in the United States in the coming years. The skills projection methodology used combines econometric time series models with machine learning approaches to predict the growth in job posting demand for skills. For the purpose of this research, projected job growth is calculated by evaluating the percentage change in the largest occupations across the next 10 years (2018-2028). Table 3 includes data for the United States, as well as for California and Orange County, to illustrate similarities and differences by region.

## USE OF LABOR MARKET NEEDS ANALYSIS IN INDIVIDUALIZED TRANSITION PLANNING

Individuals with disabilities and other stakeholders can use a detailed labor market needs analysis in a number of ways through the assessment, planning, and implementation processes of ITPs. With regard to assessments, team members can ensure that any career assessments selected include the main career and soft skills identified in the labor market needs analysis. When reviewing the assessment, stakeholders may ask questions such as, “Are we assessing the right areas given labor market needs?” and “Does the assessment focus on 21st century skills?” Currently, many assessments do not list the skills prioritized in the labor market needs analysis. Using the appropriate assessments that focus on the necessary skills can then inform the development of goals, interventions, and supports.

In addition to assessment, the labor market needs analysis can be used in planning and implementation processes. For instance, postsecondary goals can

be discussed and developed in relation to the acquisition of skills needed to be successful in the current and future marketplace. Furthermore, teams can conduct person-centered planning meetings, with everyone being thoroughly informed on the labor market and what decisions about future employment may be most meaningful.

Once the team develops strong goals, grounded in the labor market analysis, intervention and evidence-based practices can be implemented. The team can work to identify evidence-based practices for teaching the most in-demand “soft skills.” Moreover, the team can identify programs in the area that focus on skills and careers that will be highly sustainable in the current and future labor market. Similarly, teams may develop relationships with local business partners to set up supported internships so students can learn the skills on the job and provide a workforce for businesses that are in need of skilled employees.

## CONCLUSION

Detailed methods for using labor market needs analysis to plan ITPs show the potential to address some of the dismal employment rates for individuals with disabilities. Developing thoughtful and targeted ITPs that match the many strengths of individuals with disabilities to current labor market needs is a necessary practice in effective transition planning (Kohler et al., 2016). Given the importance of this best practice, stakeholders will need to gather information on how to obtain labor market data for their region and strategically apply it to the transition planning process. This research-to-practice brief summarizes possible initial steps in improving the efficacy of the overall transition planning process using real-time labor market data.

**TABLE 3: Projected Job Growth**

UNITED STATES		CALIFORNIA		ORANGE COUNTY, CA	
OCCUPATION	2018-28 % CHANGE	OCCUPATION	2018-28 % CHANGE	OCCUPATION	2018-28 % CHANGE
Personal Care Aides	37.60%	Personal Care Aides	41.8%	Personal Care Aides	42.2%
Food Preparation/Serving	17.77%	Software Developers, Applications	31.4%	Food Preparation/Serving	24.8%
Registered Nurses	15.30%	Food Preparation/Serving	23.5%	Registered Nurses	17.5%
Cooks, Restaurant	13.35%	Registered Nurses	17.3%	Postsecondary Teachers	15.9%
Postsecondary Teachers	13.30%	Cooks, Restaurant	14.9%	Cooks, Restaurant	14.7%
Janitors and Cleaners	11.79%	Janitors and Cleaners	12.9%	Janitors and Cleaners	13.4%
Accountants and Auditors	11.75%	Postsecondary Teachers	12.1%	Waiters and Waitresses	9.9%
General and Operations Managers	11.48%	Elementary Teachers, Except Special Ed	8.58%	Teacher Assistants	9.9%
Nursing Assistants	11.43%	Waiters and Waitresses	11.5%	Accountants and Auditors	9.6%
Laborers and Freight Movers	10.49%	Teacher Assistants	11.5%	Maintenance and Repair Workers,	9.1%
Maintenance and Repair Workers	10.03%	Security Guards	11.3%	General & Operations Managers	8.3%
Teacher Assistants	9.99%	Laborers and Freight Movers	11.2%	Laborers and Freight Movers	8.2%
Waiters and Waitresses	9.76%	General and Operations Managers	10.1%	Sales Representatives, Services, All	7.0%
TractorTrailer Truck Drivers	8.80%	Accountants and Auditors	9.3%	Business Operations Specialists, All	6.0%
Elem. Teachers, Except Special Ed	8.58%	Customer Service Representatives	9.1%	Customer Service Representatives	5.9%
Customer Service Representatives	7.76%	Business Operations Specialists, All Other	7.1%	Office Clerks, General	5.2%
Sales Representatives Wholesale and Manufacturing	7.27%	Supervisors Office/Admin Support	5.0%	Supervisors Office/Admin Support	4.6%
Supervisors Office/Admin Support	7.01%	Stock Clerks and Order Fillers	4.8%	Stock Clerks and Order Fillers	3.2%
Stock Clerks and Order Fillers	6.73%	Retail Salespersons	4.6%	Landscaping and Groundskeeping	3.1%
Retail Salespersons	4.41%	Office Clerks, General	3.8%	Sales Reps Except Tech/Scientific	1.5%
Office Clerks, General	3.78%	Farmworkers and Laborers, Crop	3.2%	Cashiers	1.3%
Bookkeeping, Accounting, and Audit Clerks	2.84%	Sales Reps Except Tech/Scientific	3.1%	Bookkeeping, Accounting, and Audit Clerks	1.1%
Cashiers	2.40%	Cashiers	1.1%	Retail Salespersons	0.0%
Sales Reps Except Tech/Scientific	-0.70%	Bookkeeping, Accounting, and Audit Clerks	1.0%	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	-0.4%
Assemblers and Fabricators	-5.32%	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	-0.3%	Assemblers and Fabricators	-6.7%

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