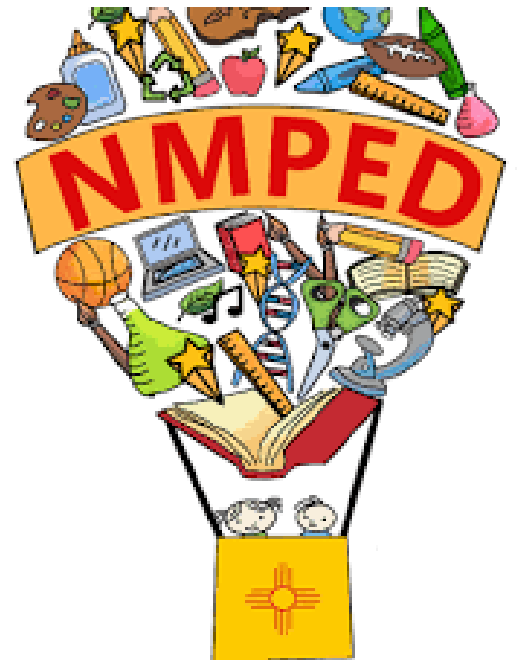


NMPED College & Career Readiness is
NEW MEXICO True

*Readiness in
Education,
Readiness in the
Workplace*



Pathway2Careers

Education with Destination

College and Career Education: An Overview

Why College and Career Readiness in Education

Relevance in Learning Keeps Students Engaged

When students are in elementary school, they look forward to school. They are engaged and enthusiastic about learning. This interest starts to fall when they are in middle school, and becomes a serious concern by the time students reach high school.



The questions we need to ask are *why* students lose interest in school and what can we do to help students hold that enthusiasm they had in early years of school. One solution is to assure learning in school is *relevant* to the world around them. If students see a clear link between what they are studying and their goals—e.g., graduating, going to college, getting a job—they will work harder to succeed (Hines-Dochterman, 2011). Understand that learning has a *reason*, or *purpose*, drives students to acquire knowledge and critical skills needed for college and careers (Blad, 2018). When students

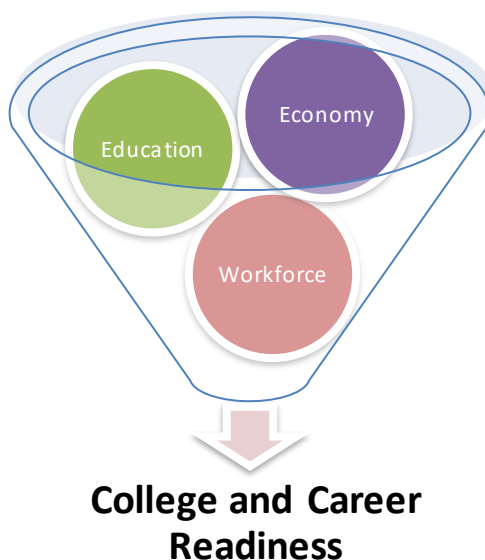
know the *why* behind the *what*, the motivation to learn is grows significantly. This is what career exploration can give students.

Students work harder and succeed when school curricula are connected to the real world and grounded in authentic career opportunities. Knowing that what they learn is valued in the workplace will help students focus on the hard work of school as a primary vehicle for career and workforce readiness.

Successful college and career readiness programs, such as New Mexico’s statewide initiatives at every grade level, accelerates educational inclusion and accessibility by making learning *relevant* as early as middle school and building pathways to college and careers for all students.

Education, the Economy, and the Workforce: a Positive Intersection

Gradually over the past decade, education, the economy, and workforce readiness have *converged and intersected* to redefine what students require from schools before high-school graduation.



This convergence has been the result of multiple factors, including:

- Traditionally underserved student populations constitute a growing proportion of the US school population.
- A low number of high-school graduates are enrolling in postsecondary education.

- Projections are that more occupations in the future will require training beyond high school. The Bureau of Labor Statistics estimates that through 2024, 11 of the 15 (73%) occupations with the highest projected growth will require education beyond high school, and six (40%) will require a credential or certification on top of a high-school diploma (Zinth, 2016).

The result of this convergence and these projections has been the birth of several educational initiatives and trends, all which create programs to assure students graduate career and college ready and all which establish high-need and high-risk students as a priority.

College and Career Readiness: Challenges and Solutions

College and career readiness has become the mantra of secondary and postsecondary education over the last decade.

By the time students enter high school, they should have a preliminary understanding of careers so they can begin to prepare for the workforce — i.e., learning what skills and education are required for different careers. Students need to graduate high school with an idea of what they want to do in the future, regardless of the pathway they choose — a four-year or higher degree, a two-year associate degree, industry-specific training, an apprenticeship, or on-the-job training (Carnevale & Rose, 2011). By linking education with careers, students do better in school (Alliance, 2011; Weissmann, 2012).

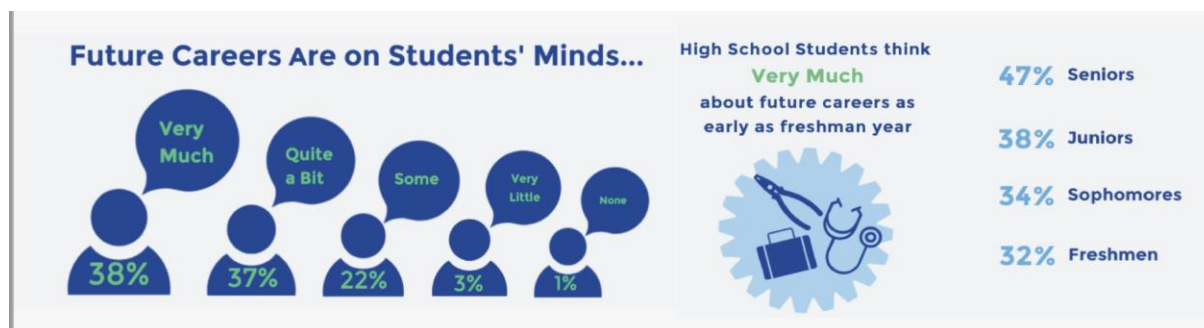
Regardless of the paths students may follow after high school, most will eventually become part of the nation's workforce. The goal of career readiness for high schools is simply to *prepare students for readiness for the workplace*—whether their pathways are first through post-secondary education, the military, training programs, or direct to the workplace.

Employers, educators, and high-school students tend to operate in separate spheres, with minimal to no intersection. Educators struggle to fully understand the needs of employers and vice versa. Caught in the middle are students who lack direction for their educational goals and have limited awareness of available careers options and skills needed to obtain these careers. To foster employment success among students and to meet the needs of local economies, there must be a vital point of intersection between education and industry.

By making career readiness a goal within every student's learning plan, education is contributing to community goals that no individual should be disenfranchised from the workforce as a result of any failure in their educational journey.

Students are In Fact Interested in Careers

Despite the gradual disengagement from school, career interest remains stable. High-school students *at every grade level* are very much interested in careers.



The task for educators is to help students connect their education to their future economic opportunities. Many students are not aware of the career options available to them or what's needed to put them on the path to those careers. Often, students assume their dream careers are inaccessible to them.

Postsecondary Education and Training Pathways

A seminal report from the Gates Foundation (2012) found a steep decline in college aspirations as students moved from middle school to high school.

- In 8th grade, 95% of all U.S. students aspired to go to college.
- In just two years, by 10th grade, the picture of postsecondary goals changes, with just 80% of higher-income students and 60% of lower-income students still planning to enroll in college.
- In another two years, the decline is significant and will affect under-representation and diversity in the workforce: In 12th grade, 82% of higher-income students expected to go to college compared with only 52% of lower-income students.

Educators need to keep college goals alive.

Education and Industry Misalignments, High-demand Careers

There is a *disconnect* among jobs available, skills required, and skilled workers available to businesses (Carnevale, et. al., 2010). When educational preparation lacks information about realities of

the workplace, “orphan jobs” appear across every industry—from entry level to upper technical and management echelons (Memmott, 2011).

As recently as 2016, the United States ran out of people for jobs—everything from a doctoral level scientist to factory workers. Thus, as part of the process of becoming more career and workforce ready, students need to learn about the realities of the workplace and the need to reduce the number of orphan jobs across many industry clusters. Career-focused education is not just introducing careers to students; it’s about introducing careers that have current and high-demand for students in the local and regional economy, careers where job opportunities are expected to grow.

Blending careers into what students learn is the solution for college and career readiness as well as a true intersection between education, the economy, and workforce development.

One of the largest demand areas in the workplace—and one which helps define educational choices in secondary and postsecondary educational programs—is the need for applicants to have mastery of one or more areas of STEM—science, technology, engineering, and math—at all levels of employment, from entry-level to advanced jobs. STEM skills are now defining the nature of jobs and being used as a measuring stick for job applicants. This is the rationale for STEM learning, and *math is the defining skill needed within STEM.*

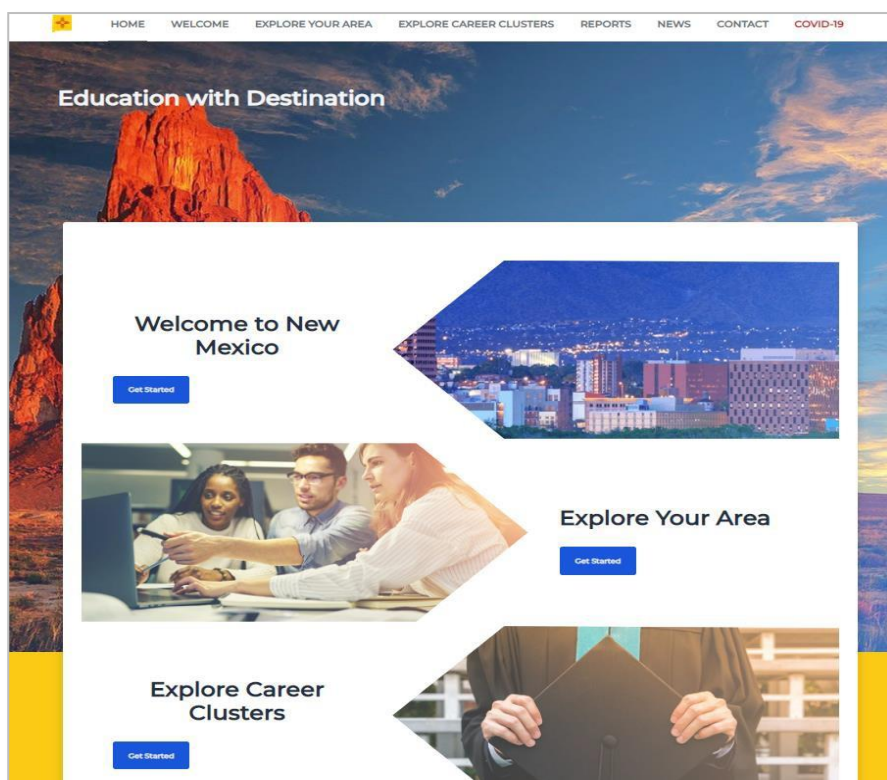
- STEM careers make up 20% of all entry- to advanced-level jobs, and half are available to students without a four-year college degree.
- STEM jobs are expected to grow by 9% through 2024, with higher wages than in other fields.
- Minorities are underrepresented in these opportunities, although they express the same interest to have a STEM career.

It’s not about how many STEM jobs are in the workforce, but about what helping students understand the relevance of what they learn to what they need for work.

Roughly 34% of students choose a STEM major in college, and more than half of these students leave these studies before completing degree requirements. Within minorities, just 16% of those who declared a STEM major continue in that pathway (College Board, 2016). And, while minority students may not be graduating from STEM programs at the same rate as their peers, their desire to have a career in STEM disciplines was equal to other students (Funk & Parker, 2018). It is our responsibility to see that all students have equal opportunities in STEM learning through postsecondary preparation and into the workplace.

New Mexico Shines with Equity, Excellence & Relevance in Education

New Mexico has created a bi-directional interlocking program driven by employer input *into* curricula, and driven *out* of the classroom into college and career readiness.



Integrating Education and Careers in New Mexico

When successful employment is a central component of the destination for learning, students and educators experience purpose and direction in their educational practices. Learning embraces preparing students for careers—rather than disseminating abstract concepts in the hopes that students find meaning.

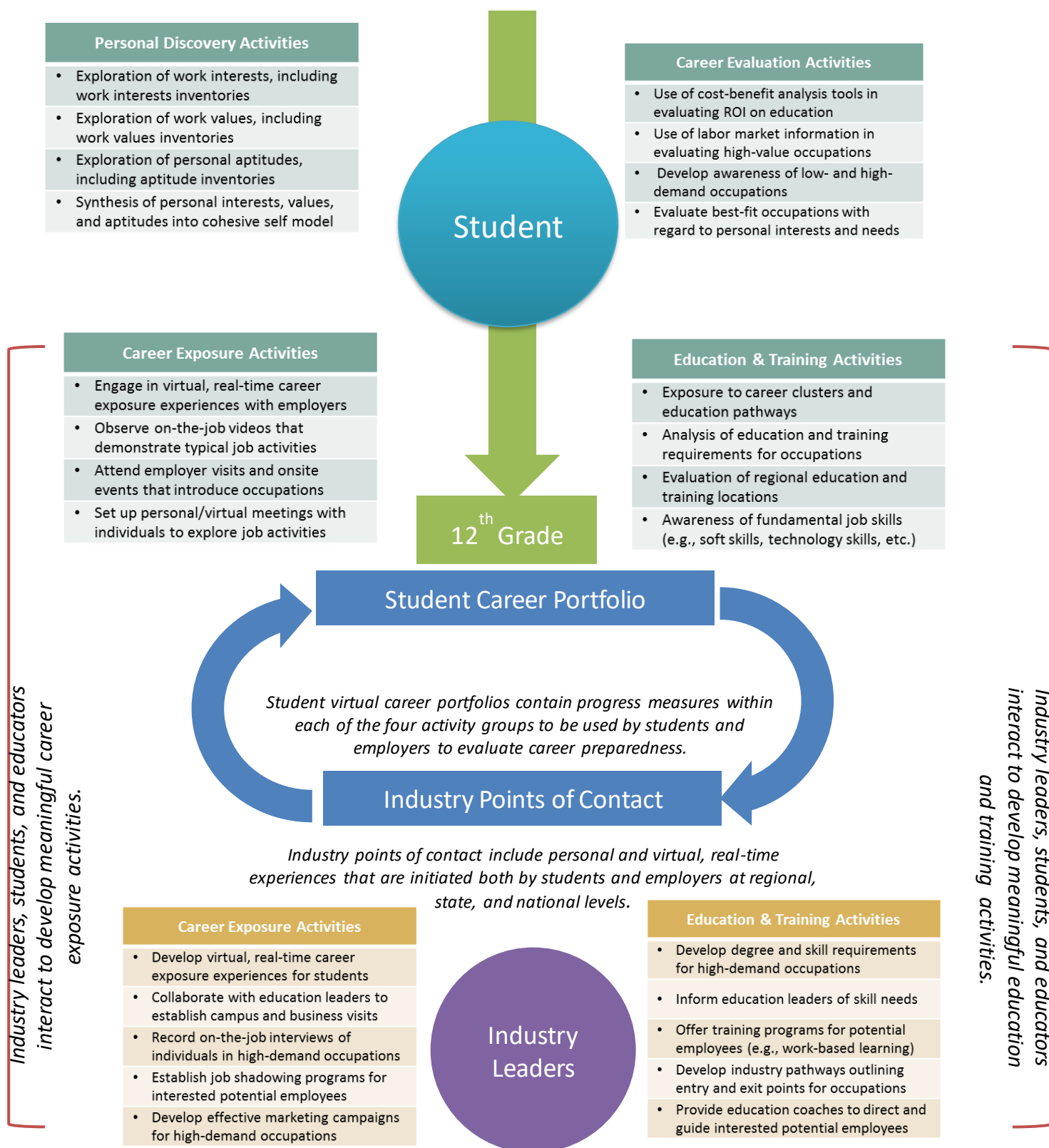
New Mexico is creating an equitable career pathways system to more effectively integrate education and workforce development. The intent is to better prepare the State’s future workforce. New Mexico policymakers and the state education office have made significant efforts to implement career-ready standards and scale-up career pathways that prepare students for high-value jobs. New Mexico has also been working to reform career and technical education (CTE) programs to bring them in line with the rapidly shifting needs of employers.

- In 2013, the New Mexico executive budget included an appropriation for “New Mexico Graduates Now” to start Early College High Schools (ECHS) in the state. The ECHS model provides students with a rigorous academic curriculum and the opportunity to earn college credits, and associate degrees, or certifications prior to high-school graduation. Priority students include minorities, students from low-income families, and students who would be the first in their families to attend college. New Mexico is one of several states that have, at the state level, embraced ECHSs as a useful model for quality secondary education, partnerships, and experiential learning.
- In 2020, the New Mexico PED won a U.S. Department of Education Expanding Access to Well-Rounded Courses Demonstration Grant. With this funding, NMPED is putting together a well-rounded series of courses in career and technical education and career-infused math to ensure students are ready for career and/or college. All courses are contextual to careers, and all are available online — both live and through video replays.
- Also in 2020, the NMPED won a U.S. Department of Education Career and Postsecondary Education Exploration System grant to develop a fully scripted career awareness system taught as a core subject in grades 6-12; and an employer/education partnership to infuse learning with relevant labor market information.

These State commitments and grants all focus on the intersection between education and the workforce, where what students learn in school about careers aligns with what local/regional employers need in the workforce. The goal for these programs is to successfully move all students along the learning continuum from high school to careers.

New Mexico Career Pathways

Throughout its documentation—its successful grant proposals, its 2020 Comprehensive Local Needs Assessment report (CLNA) for Perkins, its materials shared with districts, schools, and industry—New Mexico highlights the pathway it sees as viable for its college and career readiness journeys. The following visual, developed for NMPED by NS4ed, represents this journey and shows the linkages between education, the economy, and the workplace.



When students' informed career choices are paired with career-relevant education, a robust setting for tremendous growth and learning can emerge. Value and purpose is maximized and students can experience a genuine motivation to obtain the advanced skills needed for jobs in our changing economy. Employment success can become a common reality, as opposed to an occasional coincidence. This is the journey the State of New Mexico, supported by NS4ed's Pathway2Careers.

Resources described in the following sections were developed by NS4ed's *Pathway2Careers, Introduction to NM Career Pathways, Version 2.0*. This section offers a unique perspective on gathering data and understanding the policy effect and implications for developing models that yield mission critical change in a community, district, or organization—in this case for the State of New Mexico.

New Mexico's Use of Labor Market Information to Inform Career Pathways

Using labor market information (LMI) to understand workforce trends is an important tool for career exploration. This information—including average wages, annual job openings, growth rates, and job zones—can be used by educators to gain awareness of the top career clusters and pathways that offer high-value career destinations for students.



Annual Openings: Average number of available jobs in an industry each year.



Median wages: Projected median annual income for a job.



Projected new jobs: Projected numerical change in job openings over a period of time (usually 10 years).



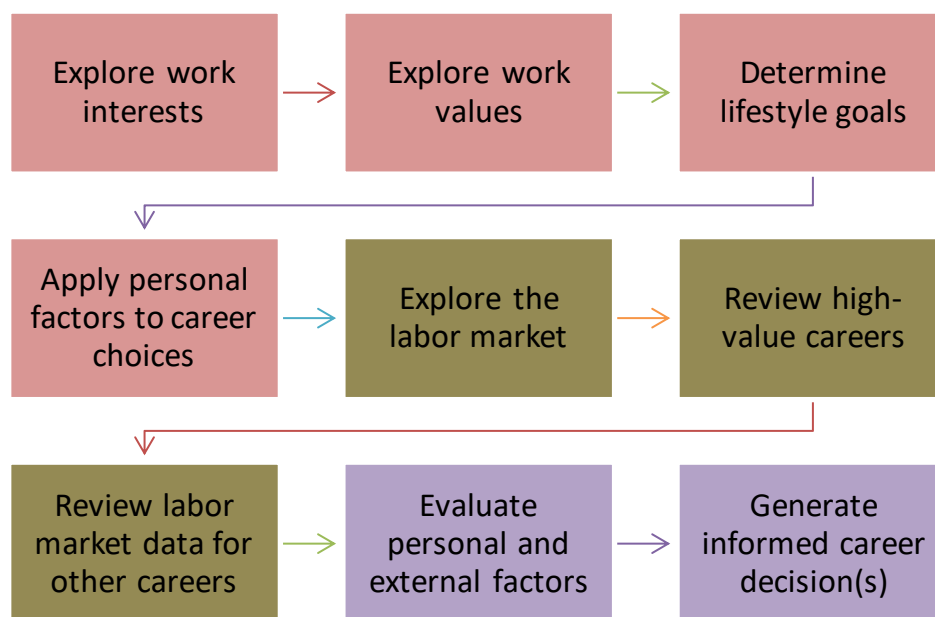
Growth rate: Percent of change in employment expected over a period of time (usually 10 years).

With this knowledge, curricula can be designed with the realities of the local job market in mind. Math and reading lessons can incorporate specific examples from high-value careers in top career clusters, and skills necessary for high-demand careers can be emphasized.

Career exploration and the use of LMI together help students to make informed career decisions.



Making informed career decisions is a roadmap for the career exploration process.



To support further informed decision-making in New Mexico's Career Pathways, students and educators can use the following *High-value Careers Table* as they build a roadmap for career exploration in New Mexico. The table,

- Gives students a *template* for listing high-value careers *by cluster*.

- Provides quick insight into top jobs within each cluster that are highest in demand with a living wage or better.
- Is a simple resource to help in making informed career decisions.

Local High-Value Careers

High-value careers are high-demand, high-wage careers that are stable or growing in demand.

School Name _____

School District _____

Workforce Region _____



Architecture and Construction

Occupation	Annual Openings	Median Wages	Career Pathway	Information Link



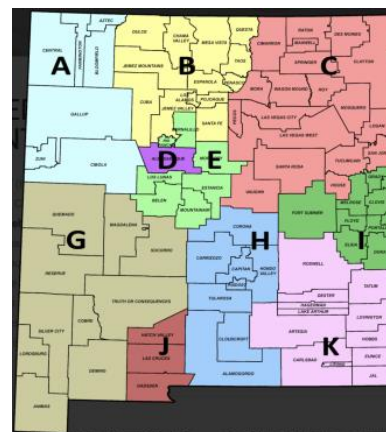
Arts, Audio/Visual Technology and Communication

Occupation	Annual Openings	Median Wages	Career Pathway	Information Link

New Mexico's Use of Local Needs Assessments

Accompanying the need for LMI to inform educational programs in the schools, New Mexico uses local needs assessments to engage businesses in the students' education and assure they are preparing for high-demand jobs in the region.

Perkins V federal funding requests for Career and Technical Education (CTE) now require states to conduct a Comprehensive Local Needs Assessment (CLNA) for its CTE program. As part of its Perkins V CLNA in 2020, NM PED convened "CLNA Councils" in each of its ten economic districts to assure the unique local and regional economies of a region were captured in the assessment, and could be realistically demonstrated in area CTE programs.



The CLNA Councils included representatives from business, education, economic development, and local government. Over a series of in-person and virtual meetings, the representatives collaborated to establish standards, skills profiles, and vision statements for CTE in each of the ten districts.

This innovative approach provided an unprecedented level of insight into the priorities and needs of employers in these communities. This approach will serve students well when they face these same employers upon graduation from high school or local community colleges and universities.

Career and College Readiness - A Better Understanding

Career readiness is gaining in importance across middle and high schools. A first step was eliminating the stigma that followed the old voc-tech programs, which were blamed in large part for diverting students from college. Instead, education is partnering with business to teach with an eye toward the economic realities to which we will send our students upon graduation.

Career readiness is not saying all students go right to the workforce. Rather, it says students should begin career exploration early on to infuse relevance into the curriculum and engage students in their own learning, thereby stemming drop-out rates. As students develop career pathways while in high school, they will identify what additional education they need—perhaps a four-year or more degree, a two-year associate degree, industry-specific training, an apprenticeship, or on-the-job training. The truth is, more than half of the jobs waiting for graduates require *some* education after high school. Students are all going to the workplace—they are all in career education and all getting ready for college and careers (Robertson, 2011). Career and technical education is now playing the role of motivator, propelling students to graduate and, for many, to continue their education.

A strong college and career readiness program will help students engage in high-school learning and navigate the first steps after high school—including first jobs, post-secondary education and training, and lifelong career management.



REFERENCES

- Alliance for Excellent Education. (May 2011). Saving now and saving later: How high school reform can reduce the nation's wasted remediation dollars. Issue Brief. Washington, D.C
- Blad, E. (2018 January). Students thrive when they see purpose in learning. Education Week.
<https://www.edweek.org/ew/articles/2018/01/17/students-thrive-when-they-see-purpose-in.html>.
- Carnevale, A.; Smith, N.; and Strohl, J. (2010). *Help wanted: Projections of jobs and education requirements through 2018*. Washington, D.C.: Centre on Education and the Workforce, Georgetown University.
- Carnevale, A.; Rose, S. (2011 June). *The undereducated American*. Washington, D.C.: Center on Education and the Workforce, Georgetown University.
- College Board. (2016). Trends in higher education. <https://trends.collegeboard.org/education-pays/figures-tables/students-stem-fields-gender-and-race-ethnicity>.
- Funk, C.; and Parker, K. (2018 January 9). Women and men in STEM often at odds over workplace equity.
https://www.pewsocialtrends.org/2018/01/09/blacks-in-stem-jobs-are-especially-concerned-about-diversity-and-discrimination-in-the-workplace/ps_2018-01-09_stem_race-ethnicitygif/.
- Gates Foundation. (2012 September 14). Intentional Futures. From aspiration to graduation: Dynamic affecting student success. A Bill & Melinda Gates Foundation Collaboration with Intentional Futures.
- Hines-Dochterman, M. (2011 October 18). Career tech becomes increasingly important as funding shrinks: Alternative to college track is best choice for some students. *The Gazette*. DA District Administrator.
<http://www.districtadministration.com/news/career-technology-ed-becomes-more-important-funding-shrinks>.
- Memcott, Matt. (2011 June 15). 2 million 'open jobs'? Yes, but U.S. has a skills mismatch. NPR News Blog.
<http://www.npr.org/blogs/thetwo-way/2011/06/15/137203549/two-million-open-jobs-yes-but-u-s-has-a-skills-mismatch>.
- Robertson, J. (2011 August 16). The hot thing in high school education? Careers. *The Kansas City Star*.
- Weissmann, J. (2012 March 29). Why do so many Americans drop out of college? *The Atlantic*.
<http://www.theatlantic.com/business/archive/2012/03/why-do-so-many-americans-drop-out-of-college/255226/>
- Zinth, J. D. (2016). Policy analysis: Early college high schools: Model policy components. Education Commission of the States.