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The Education-Employment Crisis

A Critical Overview

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The National Laboratory for
Education Transformation

The Education-Employment Crisis

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The Employment Crisis / A Whole New World

Introduction / An Upside Down World

This paper is the result of a review of contemporary literature combined with numerous conversations with high school and college-to-work institutions, with state labor agencies, employers, economists and technology and media developers in and outside of education and training. What is highlighted here is the need for the traditional worlds of education, training, employment, and labor information to be transformed by modern methods that reach all people with engaging and relevant solutions.

Prior to the pandemic, education, training, and employment were heading for turmoil. A year into the pandemic, people began to wonder, would the world snap back once the virus was under control. Another year later, all bets are off.

The simple truths of getting an education, earning technical certification, and finding a job no longer adhere to the American economic gospel. Available jobs outnumber the number of unemployed and people are quitting their jobs at unprecedented rates. Many others are simply not motivated to explore education and training or look for work. Why is this?

Two things seem to be happening which this paper explores. One, it's not just about work. The hierarchical organization of education, employers, and government no longer seem to have unwavering control over decision-making and behaviors. Two, it's impossible to understand what being "online from home" for two years has created in terms of expectations from place-based education, training, and employment or their traditional forms and methods.

This is not simply $A = B$. Covid did not just lead to education, training and employment turmoil, but to something deeper. History shows pandemics cause societal change, just as some cataclysmic events cause the natural world to change.

Today, there are not only difficult supply chain problems with goods and transport, but human capital production and supply chain problems have emerged, more complex than talent sourcing alone. Plus, the U.S. labor pool is shrinking and teachers, the frontline in replacing that pool, are themselves quitting and not being replaced. This is troubling.

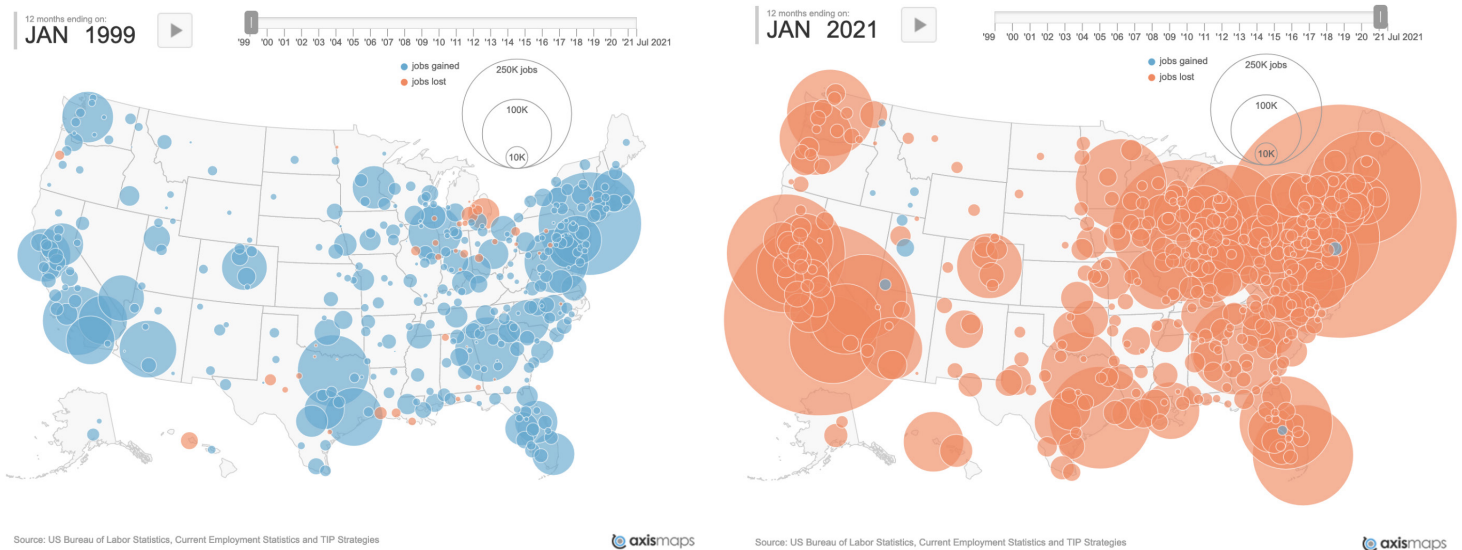
Suddenly, we lack teachers, truck drivers, port workers, and others who are unmoved by higher wages, better benefits, and signing bonuses. It is not only about work, but about working right. A new form of "un-organized" collective bargaining is emerging, where employees or potential employees now operate in a seller's market, with new demands, which is heading toward rising inflation.

To operate in complex commercial, service and social markets transacted and online and off, the production and organization of human capacity has to move toward more complex and responsive systems with greater investments in research and development.

— Gordon Freedman, *President*
National Laboratory for Education Transformation



There is something startling, actually breathtaking, in the numbers. Take a look at this slider graphic from TIP Strategies, <https://tipstrategies.com/geography-of-jobs/>.



The blue circles are jobs gained and the orange jobs lost. Slide this to 2021 and it is a sea of orange, almost 11 million open jobs.

And then there is an equally astounding number of unemployed people, not so surprising given Covid, but menacing given open jobs exceed unemployment. What lies between nearly 11 million open jobs and 8 million unemployed people?¹

- Getting people into jobs at this massive scale is a vexing problem that challenges old assumptions. With Covid, something slipped away from the employment scene. It might be “fit” for workers, and it might be a “leveling of the playing field” between workers and managers, or something deeper.

Employment in the past was often about getting a job, putting up with what you don’t like about the job, and living your “real” life on the side. The pandemic break changed that equation at its root, as major pandemics have in the past.² Peoples’ lives were no longer “on the side” and, in this pandemic, their work was from *inside* their lives. This trend of staying put is likely larger than we realize and has probably been in motion a lot longer than we thought. It also may open up a new issue of employment and labor markets being less regional, or even state-based, and much broader nationally.

1 <https://www.cnbc.com/2021/09/08/job-openings-soar-to-10point9-million-as-companies-struggle-to-fill-positions.html>

2 <https://www.institutmontaigne.org/en/blog/past-virus-how-pandemics-shape-economy>

The Shift is Happening

The Covid-effect is an odd occurrence, it is huge, and we did not foresee it coming. There are only a few times in history when entire countries shifted their whole life and work equation, placing life and work as we knew it on *pause*. Even during the two world wars, many elements of life continued as they had, while some changed drastically, such as women entering the national workforce in large numbers. However, the Covid pause opened doors we did not know existed and presented opportunities to balance the life-work dichotomy in ways that were unimaginable before the Internet. Going forward on Zoom, even after the pandemic, who will get upset when a toddler wanders into view, or a cat tiptoes across a keyboard?



Certainly, there are other obvious factors at work, which are providing much grist in social media and in the pundit mills. For example, childcare, school at home, and mothers leaving the workforce to run the new home-based centers that combine school and work. There is also the fact that unemployment benefits stood in for jobs for many.

But these alone are not enough to account for the scale of the churn in the market and the reduction in the rate of participation in the workforce³. Except for the best of cases, there are things that can be oppressive about commuting, or being in a work environment where you are physically watched, subjected to office indignities that make you feel like you never left middle school. There are many things that we accepted pre-pandemic, like putting up with an uncomfortable job environment, a hellish commute, and trying to afford a house near work, which now have been interrupted *en masse*.

While millions were already successfully working remotely where permitted, Covid demonstrated that there is a high reliability factor on the part of employers and employees working online, and high satisfaction on the part of many more people being permanently or partially remote for work. This trend clearly looks like it is not going to dissipate, which means there will be pressure on employers who want people in chairs in the office who may need to pay a premium to get them back in those chairs.⁴

There will also be plenty of people who want to return to the workplace for a range of reasons. But recent statistics⁵ also show an unusually high number of people who actually returned to work recently only to quit shortly thereafter in unprecedented numbers, citing job and workplace dissatisfaction.

3 <https://www.bls.gov/emp/tables/civilian-labor-force-participation-rate.htm>

4 <https://www.mckinsey.com/business-functions/organization/our-insights/what-employees-are-saying-about-the-future-of-remote-work>

5 Bureau of Labor Statistics (<https://www.bls.gov/news.release/jolts.nr0.htm>)

The evidence of the *reticence to return* to the previous work patterns is everywhere. You cannot walk down a city street or drive through the outskirts of a city without seeing myriad “help wanted” signs. The same is true with the online counterpart, job boards. Yet, people need jobs, employers need employees, whole industries need workers and executives, and states desperately need the tax revenue flowing into their tax coffers to fund state governments after federal subsidies. At a national level, this is a dire situation for international commercial and security competition, collaboration, and trade with allies and foes alike.

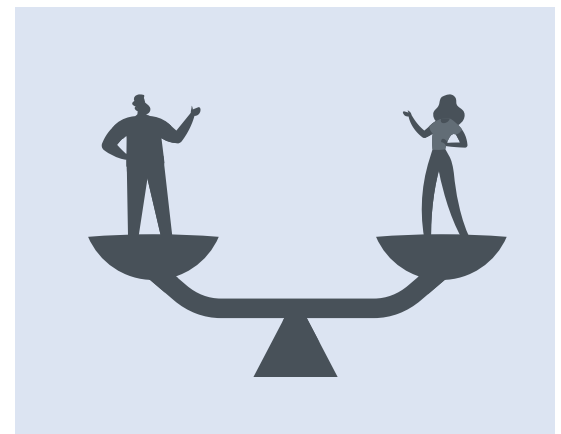
A Problem of “Fit” and “Leveling the Playing Field”

There is no shortage of verbiage on the Internet and in journals about matching cultural, personal preferences, and interests to jobs, gig work, and careers. What is clear, and was evident before in younger people, is that work is on its way to being more than a paycheck. Life choices, lifestyle, moral, ethical, and environmental issues matter, so does place. This is not what companies listed on the stock exchanges want to hear. They want as much certainty in plant, equipment, personnel, and supply chain as possible. But in a sellers’ labor market for highly skilled knowledge workers, many employers are going to have to rethink how they attract and retain those who are already skilled. People are not as likely to live two kinds of lives anymore. That is a major shift and must be accounted for in how people look for work, are trained for it, and perform at it.

If people have now become accustomed to working at home and there is a change in their desires and behaviors, then this will carry over into future virtual work and online education. Most employers were not ready for a wholesale virtual shift concerning where and how people worked, nor were the technology tool providers.

- The existing online apps, websites, software systems, and video conferencing did not have the right tools to make things run smoothly in fully 24 x 7 virtual environments where all services had to be virtual.

The pandemic has not improved how we operate virtually in the education-to-employment continuum. How we do so will need to change. We are living with a deficit of virtual products and services aimed at finding work, education, and training aligned with available jobs, as well as socializing these issues widely and hearing from people about their job experiences online. Something is missing in the education and labor sectors to support personal well-being, corporate growth, and government revenues. The broadband gap is also a significant issue.⁶



⁶ <https://www.theverge.com/22418074/broadband-gap-america-map-county-microsoft-data>

We need more universal “fit” in the products and services that make the general public aware of education, training, and job opportunities. We also need to “level the playing field” to make these tools and services universally accessible—the way our daily lives are on the web and in apps, and also be very cognizant of the equity-related bandwidth availability issues in the U.S., which needs constant attention.

“Fit” Means Virtual Parity in the Learning and Employment Sectors

Fit means that whatever I do online, including looking for work or finding aligned education and training with open jobs, learning and applying online needs to work pretty much like everything else I do online or in apps.

- The days of idiosyncratic solutions and tools to accommodate employers, education institutions, training providers, and government agencies are going to have to morph into real services, or the numbers of individuals getting educated or entering the workforce will continue to decline.

Fit is crucial and it is not just about larger websites or better apps alone. Fit is made up of two very important components:

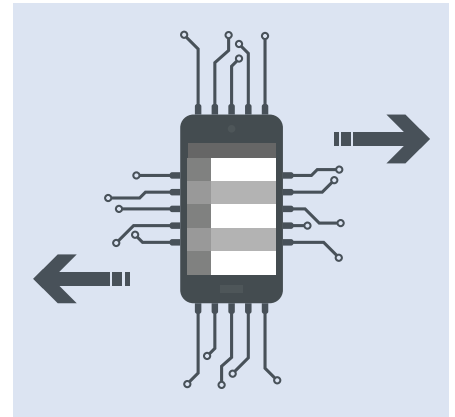
- A. Well-tested user experience (UX):** This is not government agency or college website functionality or even single-use labor data, job search tools, or state job boards. “Fit” is the extensive process that the large-scale web and app developers use to get a product to feel natural. Think of Amazon, Expedia, eBay, banking apps, or Facebook, Google, and the parade of social apps from Twitter to WhatsApp.
- B. Big data crunching:** Recommendation engines between who I am (my identity characteristics) and what else is going on in my fields of interest should be connected to employment possibilities that are appropriate for me that are gathered from patterns of all the other users on the system. Again, think of the larger websites that build the obvious patterns from all user data to service each user more effectively. This is not part of the skill set of agencies and institutions.

State job boards, employer job postings, and education or training institutions’ websites and pathway pages are *not fit* by the criteria of engaging UX, nor is the big data processing that delivers reasonable results to individual users.

- While there are some promising efforts to streamline or improve supply and demand in the education to work sector, the tools and architecture are still falling short of finding answers to filling the ten million open jobs or to steer the eight million unemployed people and another twenty million who are underemployed to what might be useful for them.

Leveling the Playing Field

Covid placed many more people on the same plane, doing work, getting supplies, and communicating online. There were no limousines or concierge services online. Online is online. Managers, leaders, and workers found themselves in a very horizontal world, where *cooperative production* was the name of the game. There was not a glowering manager, or peers around a conference table, or a boss leaning into a cubicle with one hand on the partition. Similarly, going to school or college or taking a technical training program online took on a similar less than hierarchical structure. (However, the spread of jobs that stayed in-person is also significant.⁷)



Online activity has created a challenge to hierarchy and a push toward executing roles well with other people. This mantra has been preached for years by MBA programs, coaching companies, and enlightened HR professionals, but has not been fully embraced.

Over the next year, as lingering on and off in-person and remote work and learning see-saw between the two, notions of “fit” and “leveling the field” are undoubtedly going to be embraced by many and roundly rejected by others. People—employees and students—ultimately will vote with their feet or their fingers.

It would be good for the economy and home finances if the appropriate, well known user-friendly tools could enter the learning, job searching, and working worlds.

When On-the-Job is the Only Option

Millions of jobs need to be filled, many that people are not even familiar with, that require showing up at an office or job site and having specific certifications or credentials from community college, technical programs, or high school career and technical education (CTE) programs (though many hard skills are outside of CTE programs). Beyond the training or certifications themselves, employers are constantly looking for the so-called soft skills that can also make a difference between someone technically trained or capable, and one who can communicate, work well, understand the problems and articulate solutions, and consistently show up on time.

⁷ <https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries>

These soft skill jobs in the service, construction, healthcare, and public works sectors are just a few of the high demand jobs in the economy. But it is difficult to interpret what the jobs are, what is needed for the job, and what the *experience* will be like from reading job posting on *Indeed* or other services. On the other hand, employers are not waiting. Through the use of corporate Learning Experience Platforms (LEP), jobseekers can actually try their “virtual” hand at a potential job or career. The LEP corporate platforms are well ahead of the Learning Management System (LMS) in use in higher education and K-12 districts.⁸

How is someone to find these opportunities—not just the jobs, but also the education and training leading to in-demand work?

- Because of problems with “fit” and “leveling playing fields,” many people are never going to show up at a community college website or state agency looking for education or work.
- Nor are they going to be aware of wide varieties of work, some of it lucrative and exciting, or how to get prepared and certified for that work, and whether or not it will be a good experience.

Traditional Methods Cannot Address the Crisis

For the last quarter century, the U.S. Department of Labor (DOL) has collected statistics on the types of jobs that are available, how and when those jobs are filled, and when employees are let go. *Labor Market Information (LMI)* from public agencies and private entities are the two common forms of labor data informing the public, employers, and education intuitions of the labor market status and trends.

- Traditionally, the national statistical labor base comes from the Bureau of Labor Statistics (BLS) in the Department of Labor (DOL) and is connected to job and occupation categorizations provided by [O*NET](#) from DOL. O*NET houses the standardized job types and provides useful tools to employers, labor tech developers, education systems, and individuals.
- The O*NET system is maintained by a regularly updated database of occupational characteristics and occupation information across the U.S. economy. It describes occupations in terms of the knowledge, skills, and abilities required as well as how the work is performed in terms of tasks, work activities, and other descriptors, including useful videos.

These detailed data produced by BLS provide the basic job trends in hiring, unemployment, underemployment utilized by other federal and state agencies, and by private companies and nonprofits that track labor trends. The job descriptions and employment categories in these data are *proximate*, meaning they are derived from survey-based statistical pictures of the job market that is composed of reasonable coarse-grained trends. These data were not designed for the rapid-paced labor market of today where job types

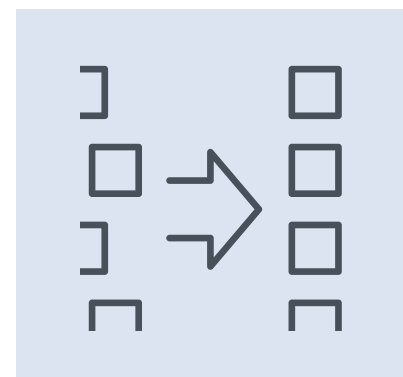
⁸ <https://www.edapp.com/blog/10-learning-experience-platforms/>

and frequency of change are constant. The O*NET and BLS instruments of the DOL cannot keep track of rapidly burgeoning jobs, the rapid turnover in gig work, or jobs that pass in and out of existence within a year. The fast-paced addition of new roles and deletion of old ones in the labor market is very difficult to keep up with.

- Problem # 1: Lack of dynamic real-time labor data, a fundamental problem in moving to a dynamic real-time ability to best inform education and training programs in order to design programs to better fill jobs and prepare people for in-demand careers.
- Problem # 2: Awareness, alignment, and outreach around public outreach for high-demand jobs and the training to support them. *Alignment* and *Awareness* of job and career requirements and where to find education and training aligned with in-demand careers is a critical need.

The alignment of education and training programs with in-demand jobs has seen sizable investment from several of the largest national education and labor philanthropies and by a select set of state governors and legislatures that passed legislation to put in place structures to incentivize career, technical, and academic programs aligned with in-demand work in those states.

That effort has created the Credential Registry operated by www.CredentialEngine.org, which provides open and transparent standards that allow for the tracking of programs and pathways associated with in-demand jobs. However, the Registry requires courses, programs, and pathways to be coded for use in the Registry (alignment), and then those credentials in the credential marketplace need a systematic way to get to the public (awareness).



What is still needed are:

- A. Aligned Personal Records:** How well individuals are trained or educated for the work they will perform, or the career they will pursue, needs to reside in an individual learner record (or a credential wallet) that individuals can share at their discretion with institutions and employers. There is an entire standard and use category of Learning and Employer Records (LER) and other variations on individual learning records that are data enabled.⁹
- B. Awareness of Open Jobs Aligned with Personal Interests:** How aware individuals are of what types of work exist that might be of interest, that fit their lifestyle, or match their previous work. This area requires a deeper understanding of how skills acquisition can lead to new types of work or careers. New products and services are needed to reach the public in general through social media and other methods using data standards.

⁹ <https://www.uschamberfoundation.org/t3-innovation-network/ilr-pilot-program#>

- C. Awareness of Education and Training Aligned with Required Education or Training: What is needed for specific work or careers should be routinely communicated. Similarly, this area does not have well-developed, easy to understand, examples provided by workforce boards and regional community colleges, though several states are examining “one-stop” portals. However, if a new type of system, such as an “Opportunity Portal” was created, multiple organizations would need to cooperate.

It is clear that *Alignment* and *Awareness* are critical and that there is a market gap in addressing these needs.

The Covid Snowball Effect

Prior to Covid, the problems with federal labor data, LMI, awareness of jobs and careers, and alignment of education and training with in-demand hiring already existed with no comprehensive solution in place, though some promising efforts are underway to address parts of the solution. These include large-scale efforts in creating new standards that work across traditional boundaries, new alignment tools, and repositories. Yet these alone do not create a public engagement movement to unite all the barriers that exist between the following:

- A. The behaviors of learners or jobseekers
- B. Education or training providers
- C. Employers
- D. Agencies tracking some of these data
- E. Solutions companies offering one of more aspects above

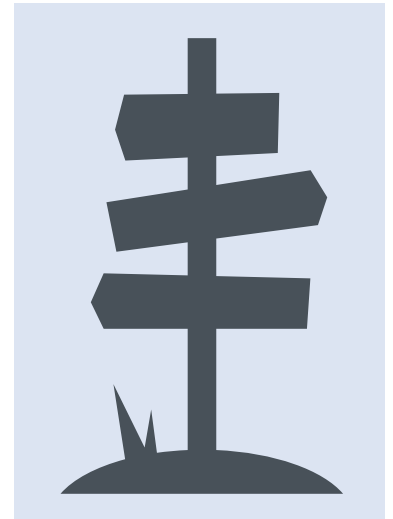


Operating in the Post-Institutional World: What is next, how can the needle be moved?

Where to Go From Here # 1:

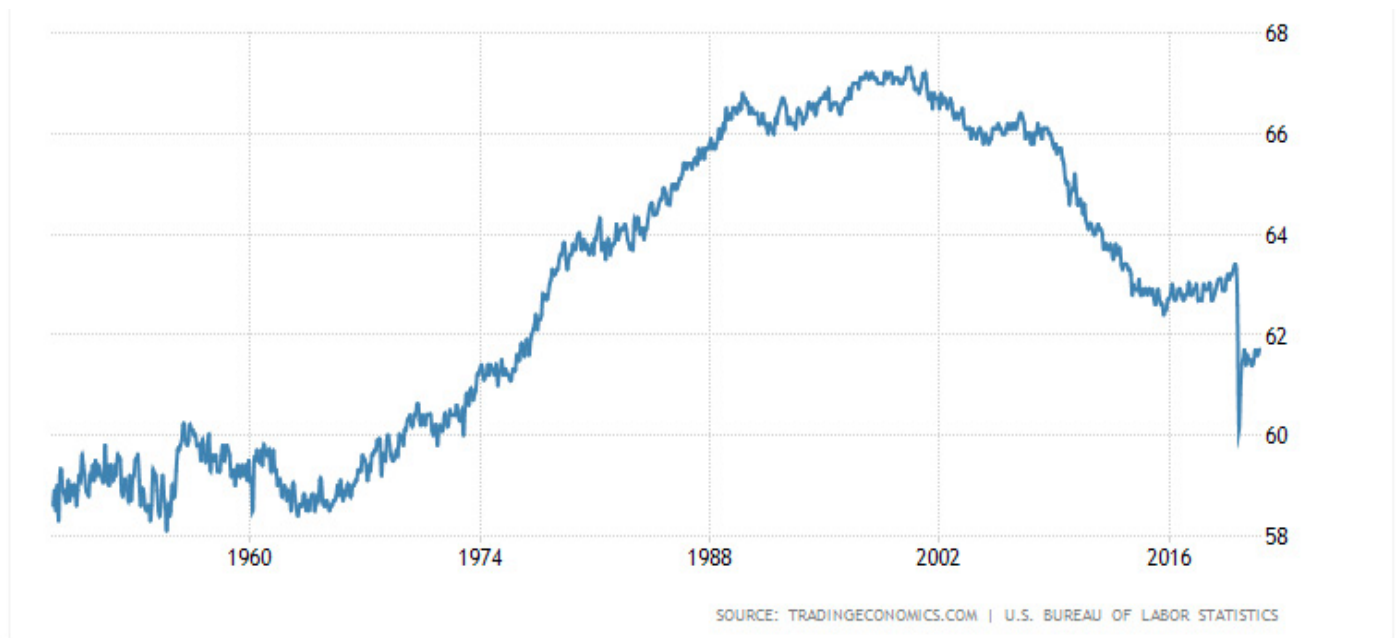
Get Specific, Run Experiments, Solicit User Feedback, Publish Public Data

- Doing more, and a better job, of what has already been done will not solve the historical nature of the Covid-era shifts pertaining to: how people want to work, where they want to work, how they get motivated, how they find work, how they get trained, or receive the credentials they need for work.
- These kinds of activities—finding programs, finding work associated with programs, being motivated, and finding alignment with skills that employers want must move to general web or app scale in order to become available to everyone as part of daily life. Otherwise, these efforts are landlocked in agencies and institutions.
- However, efficiency will come with moving beyond retrofitting education and training programs to jobs and, instead, finding jobs that are of interest and then have mechanisms available from employers and providers to fill those gaps.



This is a daunting problem, but one that is necessary to address the scale of open jobs in the millions, the scale of unemployed in the millions, as well as the scale of the unmotivated population that appears to be significant. The unmotivated appear to be sitting out both education and training and searching for work. Then there are those who find work and quit, also in large numbers. They are a new category: job dropouts. Add this to academic dropouts.

Trends in Labor Market Participation Rates



This raises two issues: one is scale (is there a one-size-fits-all solution) and the other is differentiation, clustering, or segmentation (narrowing interests and opportunity for specific individuals, institutions, and employers). Each of these is likely, raising the question:

What if the old paradigm of looking for work, exploring interests, or needing to work, is simply over? What if the days of “you have to get a job” are over? In addition to the motivational issues, which could be tied to the trying times of Covid and plenty of Federal relief, there is still a demographic shift of a declining population of working-age people that is already impacting both employment markets and higher education and training enrollments. It will not go away when, and if, we return to “normal,” which is highly unlikely.

In May 2021, Emsi, the labor data company, released an in-depth study about how the historic decline of U.S. population growth is transforming the labor markets and college enrollments.

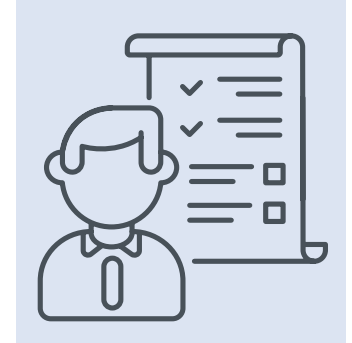
“Businesses can no longer assume there will be enough people to go around. We are already starting to see substantial rises in wages as the market works to find the new equilibrium, along with production slowdowns from those companies that cannot find the talent.”¹⁰

10 *The Demographic Draught: How the Approaching “Sansdem” Will Transform the Labor Market for the Rest of Our Lives.* Emsi (2021).

But all job demand, all hiring, and all qualifications are not the same. Different job searches, hiring outreach strategies, and education and training options are now required depending on the sector to move the needle in hiring. Here are some examples of *narrow casting*:

- **Service and Production Sectors (on the job)**

- Inducements are necessary to bring more people back to the frontlines
- College degree or specific certification not necessarily required
- Meet the public, work in teams, stay on mission, be reliable are necessary



- **Knowledge Sectors (could be virtual)**

- Lifestyle perks are important like working remotely, leave policies
- College degree, some college, college specialty, or specialized training required
- Collaboration driven, highly flexible, add to bottom line, innovate

- **Qualifications Sectors (specific credentials required)**

- Finding a new or better job requires specific education, training, certification
- Some college, strong work history, trainability, likely some math and communication skills
- Task and job oriented, improvement driven, teamwork, ability to problem solve

Job posts and college programs are “broad”-casted on the web as a whole or in broad apps (such as *Indeed*) at a time when “narrow” casting is critical.

- Probing for interest or need in the consumer base and feeding it with specific likely opportunities for work, training for work, or degrees for careers must be where an *education-to-employment engine* takes a user.

To work, this effort must become personal and social, not institutional and corporate. This is both “fit” and “leveling the playing field.”

Where to Go From Here # 2:

Manage All the Data, Just Like the Large Web and App Consumer, Information and Social Tools

Web systems like Amazon, eBay, Expedia, and Zillow manage “all of the data” in their sectors. But we are a long way off from having such capabilities in matching people, education and training, and jobs. That does not mean it is not possible. It means that there have been other efforts focused on data sets, tools, postings, and catalogs with a number of start-ups funded by venture funds and national philanthropies that have *not yet produced* a way to manage “all of the data” and to break down that data into separate clusters or individual user types.

- Managing all the data is not easy if the data are all different.

The education-to-employment data are different in that a) resumes, b) course or program listings and c) job posting are unstructured data that computers do not understand and still have full physical counterparts. Turning them into data in each silo has been difficult, let alone combining them in one system.

- A. RESUMES:** There is no standard stockpile of resumes to sift through, and even if resumes are “scraped” from the web, job boards, and LinkedIn, they reveal little about an individual’s actual talents, skills, knowledge, and abilities. This is a large problem; the LER and other individual learning records have not yet evolved a uniform way to have skills-matching between people and jobs within a learning record.
- B. PROGRAMS:** 1) Education and training course, program, and pathway listings are proxies for what is taught and learned in class or in a training program, and 2) they do not exist in a type of standardized format that would enable meta-tagging and easier translation between formats. This is a large problem, as the content and outcomes of courses cannot be easily compared with job types. Item number two is what Credential Engine seeks to solve.
- C. POSTINGS:** Job postings, on the other hand, are the most digitally mobile or active compared to resumes and programs, but traditionally job postings skirt around what the actual job is and tend to broadcast more about the employer and less about the nature of the work and its requirements. They are also subject to employer bias of overstating some issues and leaving up postings for on-going harvesting of resumes. This is a large problem that is somewhat obscured

by the strength of both the for-profit job boards like *Indeed* and the state unemployment job boards that are operated by contractors. Neither version of these types of hugely expensive to operate job boards connects deeply to individual learner/employee data or to courses, programs, and pathways leading to jobs data, though in the future some form of widgets or apps could do this.

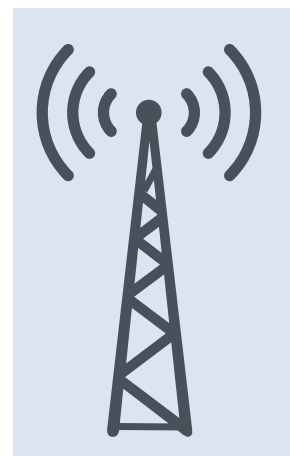
There is one quite inventive and logical way to connect people (resumes), programs (course listings), and employers (job postings) through various skills schemas that have the definition of a skill if it is possessed by a person, taught in a program, and required on the job. A very creative version of this is called Skills Shapes and is described in a paper from Emsi and the Strada Institute for Work, *New Geography of Skills: Regional Skill Shapes for the New Learning Ecosystem*.¹¹

It is about getting the word out in the ways that people expect to receive it.

Gossip and word-of-mouth are the level best way to transmit information among people. In today's world, this means social media, following influencers and peers, and tracking memes and personas online. Even job postings that are either static websites or on flyers or email lists. This is hardly the world of education. Targeted communication via the common online channels is where we need to go to narrow the unemployment numbers and to fill the soaring open jobs.

Given the scale of the problem, it is surprising that more investment and research and development is not happening. This is how such a service could arise.

- Where investments are being made, they are being made by states, national philanthropies, and venture-funded start-ups, but they are not aiming to solve the whole problem with a deep focus on how to reach the public. While a number of states are going through the motions to build an education-to-employment data system and infrastructure, *this does not include crossing the institutional barriers to communicate well with the general public.*
- Unless “all the data” and the “awareness for all” are cornerstones, the problem remains badly fractionated in individual tools and services in state government-contracted systems that are assembled and chosen by government employees who are not schooled in mass communications. *Only state department of motor vehicles (DMVs) and the taxing arms of the state are in communication with all the people who either drive or pay taxes, which leaves out many young people and those who are not filing taxes.*



11 <https://www.economicmodeling.com/geography-of-skills/>

- The dilemma is how open jobs get to people who need or want them, or don't know about them but could become interested, and whether what is communicated is received, heard, or read, and produces a response. *This is the world of social media. If this problem is not solved, it won't matter how good data systems, state portals, and other private tools are.*

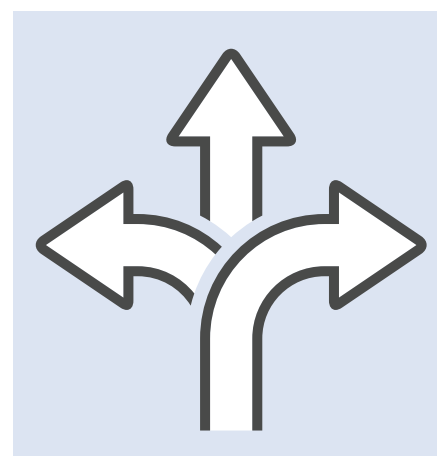
There are any number of large web portals that are essentially job boards: Indeed, LinkedIn, Glassdoor, Google for Jobs, and Monster. These are useful services full of data, known to the public and have wide distribution, but they have not cured the hiring ills in large part because they do not connect to needed education and training for in-demand jobs connected to jobseekers who visit these sites. Nor have they made this all about social reinforced communication.

Conclusions

PURSUE THREE ROADS

If you accept that *fit* and *leveling the playing field* are important, if you accept that *awareness* and *alignment* are critical, and you accept that there is no full or satisfying solution to combine the three artifacts (resumes, course listings, job postings) in a dynamic, user-friendly way, then where do we go from here to create awareness and interest in open jobs, education and training for those jobs, and reap the benefits from both?

Here are the three current roads that could make a difference because of the scale of their operations (all of the data) or the level of “fit” they provide:



Road # 1: Open Data Schemas

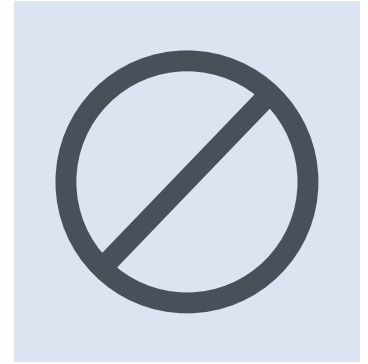
This is being pursued nationally by the U.S. Chamber of Commerce through significant partnerships as part of the T3 Innovation Network. It provides a methodology for enabling interoperability between open data for all participants in the labor, education and training, and employment sectors, including the skills-level data in the three major categories (resumes, programs, jobs). And it is making a significant effort to coordinate talent financing, supply chain management for talent, digital credentials (records in wallets), employment data, and data standards.

Road # 2: Transparent Marketplace of Credentials

This is the Credential Engine work primarily funded by participating states, the Lumina Foundation, and the JPMorgan Chase Global Philanthropy. While aligned credentials are an important component of the next education-to-employment infrastructure, so are skills designations which could be common across resumes, programs, and postings, leading to new ways of characterizing those three and their combinations. This is an important engine which could be the education-to-employment infrastructure for state and private job boards, community colleges and universities, app developers, and others.

Road # 3: Non-Institutional Open State Portals

This reality does not yet exist outside of the corporate world, but it is necessary to *navigate* around the significant roadblocks put up by well-meaning but perhaps antiquated operating models found in higher education institutions, workforce development agencies, state level departments of labor, as well as the myriad of fractional tools and services which cannot deliver end-to-end solutions.



Such an open portal would allow open data schemas to define its content, make transparent credentials be like currency for in-demand jobs, and could begin to solve the *fit* and *leveling the playing field* problems by proving grounding for *awareness, alignment,* and taking *action*.

REMOVE THE INSTITUTIONAL AND AGENCY ROADBLOCKS

This may not be welcome news to many, but it is also painfully clear that the institutional, agency, and state bureaucratic structures are limited in delivering *fit, level playing fields, awareness, alignment,* and taking *action* for the wider general public. This strategy in which millions are placed may not be up to solving the current education-employment crisis.

The core problem for institutions with academic, career, and technical training; agencies promoting the growth of training for in-demand jobs is reaching millions of people who are highly unlikely to go to institutional or agency websites, and if they do, highly unlikely to go far on those sites. For the targeted marketing and social media messaging that does occur, it does not bring potential applicants into a system that will guide them on to explore pathways, careers, and compare job possibilities.

We are entering an area of “post-institutionalism,” which means the general public, the unemployed, underemployed, or disinterested do not look for institutional solutions to their problems. This is not news; it is clear in the enrollment and job application statistics. It is evident they are on another channel in terms of exploring work, being motivated, and finding out what to do. So where are the roadblocks and why do they exist?

Roadblock # 1: State Level Lack of Clarity, Internal State Competition, Lack of Coordination

The mechanisms to educate or train individuals (institutions), to find work connected to in-demand jobs (agencies) and the state level labor data, K12, higher education, and workforce and CTE leadership do not coordinate with each other except in rare cases. While there is a drive for states to have “one-stop” portals, the reality of how that happens is far from clear because some entity or cross-state structure must take ownership for an end-to-end school-to-college-to-CTE-to-employment pathway system. At a practical level, there is generally jockeying on what agencies or individuals will control this process without any clear notion of how growth or success will be measured and tracked and then improved upon.

Recommendation: States need to coordinate their efforts much more carefully and more horizontally than what occurs now. It is not clear what such structures will look like in the future. In all likelihood, they will need to be driven by the governor’s office.

Roadblock # 2: States, Institutions, and Agencies Lack Marketing Capabilities to Fulfill Needs

There is little incentive for innovation and new tool adoption in this realm as several federal government efforts (O*NET) and the large labor market information (LMI) providers aggregate and correlate data without much deeper matching at the skills level. Contrary to this, everyone in the country and in every role in a state is familiar with social, commercial, and information marketing that is targeted specifically to individuals or groups of individuals. This is the modern reality that cannot be substituted for traditional and general marketing over social media. Since this marketing needs to be targeted and comport with how individuals receive and act on information today, there would need to be a state mechanism that provides this for multiple agencies in a state. Again, using bureaucratic mechanisms to create, contract, or directly use technology for these purposes and track the data is not something commonly associated with multiple agency operations in a state, nor does it utilize the data power in the rest of society and commerce.

Recommendation: Modern marketing is by its very nature the antithesis of how government and institutions operate, although it is the stock and trade of political campaigns and staple of “influencers.” If the governors’ offices maintained a public marketing group specializing in getting people back to work and filling jobs, coordination and cooperation with education institutions would have to be managed across agencies, and contracts could be let to assist the state in this operation.

Roadblock # 3: Responding to Overwhelming Number of Tools & Solutions

Every institution, state agency, workforce commission, and CTE operation is inundated with vendor-supplied tools and solutions that are overwhelming, answer fractional problems in the education-to-employment continuum and, at the same time, are obligated to respond to U.S. Department of Labor and state labor agency compliance. As a result, choices of tools come down to a committee decision or running through requests for information (RFI) and requests for proposal (RFP) processes, which leave the final decision in the hands of individuals who do not operate public marketing and end-to-end solutions data, nor have the past experience to guide these processes because this issue of cross-agency, cross-institutional, marketing-rich activity is new and comes at a time of great flux in the country.

Recommendation: Create new models of coordination and decision making at the state and across state levels that bridge various agencies and draw upon best practices and expertise from other industry sectors.

- State coordinating boards are necessary for managing the school-to-college-to-work workflows. Competing agencies defeat the purpose of this important work.

NEXT STEPS

These are large and consequential issues that require supplying the public with meaningful results to get people back to work, into work, and educated and trained for work. In order to do this responsibly, and in a way that growth can be tracked, requires new kinds of coordinating bodies that can partner, contract, or employ people who have previously dealt with such complexity and high consequences. There are analogues in security, referendum management, and vehicles. Public and inter-agency coordination of discovery and decision making is essential. How this evolves in each state requires guidance that does not currently exist. A great deal of conversation and socialization across segments and sectors is required now, not more jockeying to see different solutions arise in different states.

The overall conclusion is that given the unprecedented scale of the issues there should be overall and unprecedented cooperation to create a sustainable national infrastructure of open opportunity activities in the country, not constrained by state ad hoc decisions, that tie multiple cross-sectors together in a common method of operating in the education-to-employment ecosystem.

About the National Laboratory for Education Transformation (NLET) & The Credential Alliance

Gordon Freedman

Freedman is a long-time advocate and expert for broad-based change across the K-to-Career spectrum. Freedman founded the National Laboratory for Education Transformation (www.NLET.org) in 2011, a California-based research and development nonprofit committed to transformational change in K12, higher education and workforce development. Freedman also manages Knowledge Base, LLC, a consulting firm founded in 1998. Freedman formerly served as Vice President Global Education Strategy, Blackboard Inc. and was part of the start-up of California State University Monterey Bay.

NLET / www.nlet.org / info@NLET.org

NLET is a California research and development non-profit focused on systems level changes in mathematics learning, state K-12 data, learner records, and the education-to-employment pipeline. NLET has assembled a board, advisors, and experts with deep knowledge and experience to work collaboratively and across sectors to find, test, and iterate solutions that break through the roadblocks and bring more culture-changing technology and methods to tie together the worlds learning, education and training, and earning.

The Credential & Skills Alliance / <https://nlet.org/credential-alliance>

To move toward a more unified education-to-employment world that operates with alignment, fit, a more level playing field that can track outcomes for individuals, education, and training providers and for employers and states, an alliance of critical cross-sector entities must co-process, each bringing to the table certain expertise, functionality, reach, and credibility. To that end, NLET has formed the Credential & Skills Alliance of the following founding members and invites others to discuss the Alliance. Like a NASA mission, the mix of nonprofits, for-profits, institutions, and agencies are needed to work together.

Founding Members of the Credential & Skills Alliance

- Credential Engine, www.CredentialEngine.org
- Skills Engine, www.SkillsEngine.com
- Southern Regional Education Board, www.SREB.org
- Velocity Network Foundation, www.velocitynetwork.foundation
- Greenlight Credentials, www.greenlightlocker.com
- National Laboratory for Education Transformation, www.NLET.org
- GoEducate, www.GoEdudate.io

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