## Finding Meaningful Solutions to the Workforce Training Dilemma

## Part One

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**ABSTRACT**

Workforce Development is a term, concept, policy, funding and practice arena that has been built up from the 1998 Workforce Investment Act, WIA, which grew out of the Job Training Partnership Act of 1982.  July 2014, WIA was revised, reauthorized and became law as the Workforce Innovation and Opportunity Act, or WIOA.  Each act has been focused on creating better success at training individuals, most unemployed or underemployed, for existing jobs in industry and government.  The supposition underlying both WIA and WIOA is that principally U.S. community colleges can provide the necessary training that employers seek and that jobseekers can take to compete for existing or emerging jobs.  In theory and intent, the laws are sound, but in practice there are fundamental problems that do not have solutions that funding alone can solve.

The problems are based on unsound expectations that community colleges and employers can find and act on common solutions to the complex issues surrounding the organizational structures and operations of colleges, employers, workforce bureaucracies and economic development organizations.  These are four classes of highly structured organizations that have no effective means, by WIA or WIOA, to work together to make it easier and more efficient for jobseekers to find work and employers to get the employees they need.  The solution to the dilemma requires a much more concerted effort to create singular and coordinated efforts to solve these inherent problems.  This will require national level experimentation and modern software and standards designs that do not presently exist because of the diversity of opinion, programs and stakeholder prerogatives.  Hopefully, WIOA will assist in prioritizing the difficult practice of alignment.

*In the commercial sector it used to be the case that air travel, lodging, dining and car rental were separate activities of separate companies that required phone calls or a visit to a travel agent to book as a single trip.  Today, these activities are unified either by frequent flyer program or by visiting and booking through a commercial site like Expedia or Orbitz. Workforce is the combination of employers, training providers, labor agencies and jobseekers.  Could there be a solution that unites into one process those that are now separate and isolated?*
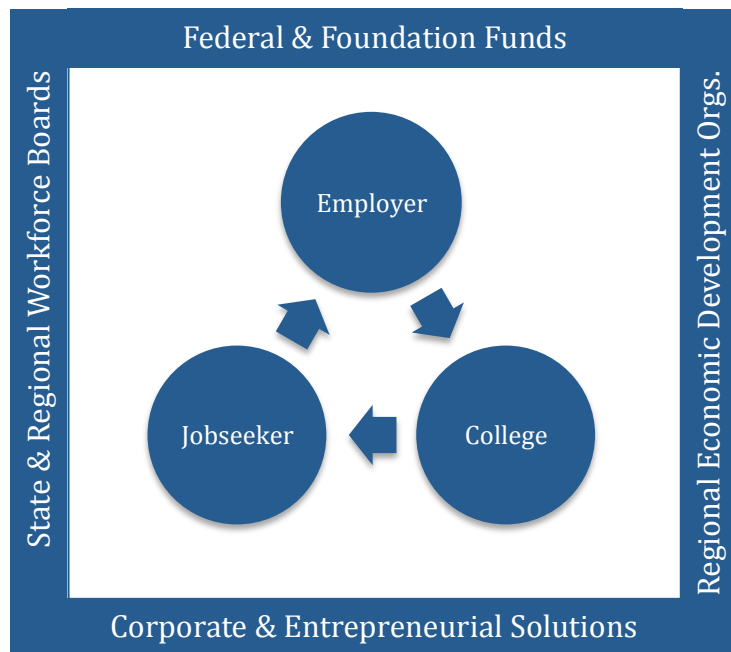
The workforce dilemma is seen in the box to the left. In the center are the three major stakeholders that need to interact together in a seamless process in a fast-paced economy. In practice the three are not connected or even easily capable of re-organizing themselves as a unit to make the process more unified.

On the four walls of the box are the external forces designed to get the three stakeholders to work better together. However, they are not coordinated with the stakeholders (circles) nor do they have authority over them, nor is there an attempt to create market-driven solution across the whole spectrum of workforce participants.

**BACKGROUND**

The National Laboratory for Education Transformation, www.NLET.org, is based in Santa Clara, CA and is dedicated to assisting transformation in K-14 and workforce through the use of modern technologies that from more unified and efficient cultures of use.

NLET has the been the recipient of or organizer of funding from the National Science Foundation, the National Institute for Standards and Technology, the Bill and Melinda Gates Foundation and private foundations. NLET has a strong set of relationships with community college leadership and has direct knowledge of the operation issues in colleges as training providers.

NLET uses its Silicon Valley base to explore how technology has transformed culture in the consumer and commercial sector. Further, NLET is partnered with technology developers and non-profit standards organizations to assist in its mission to create deeper and more organic linkages between employers, providers and jobseekers. NLET believes that a thousand flowers blooming will not necessary address the hard issues confronted in very different organizations working on labor problems in common. This paper is an exploration of issues that NLET and partners have observed in a number of venues where NLET is involved in portal, software and alignment projects across the U.S.

## OVERVIEW

It should be considered a good thing that there are nearly five million open jobs in the country and an equal or greater number of unemployed or underemployed people.

The reality is that many of the available jobs require a range of skills that would not normally be taught in college as either academic or occupational programs. The reason for this is that the information economy has drastically altered the employment and education landscape.

The U.S. leads the world in the quickly evolving advanced manufacturing sector and in other sectors where technical training has more to it than simple skill acquisition and where job requirements are subject to rapid fluctuation. An advanced 3D printing technician trained on one generation and type of equipment could easily find his or her particular skills out of date in six months because of a new wave of 3D printing technology. This is true in medical technology fields as well where demand is high for specifically trained employees.

Similarly, specific technical skills are not the only requirement of many occupational categories. Most technical jobs today require a laundry list of other capabilities that historically were not commonly associated with occupational training. These include problem solving, analytic thinking, working in groups, working within a chain of command, managing client-facing services and showing up on time every day are part of the full package. Additionally, there are many college age students, and their parents, who are wary of skill-based jobs even if they are in demand, pay well and are as demanding intellectually as other jobs.

Because of the mix of requirements in skills-based jobs, the lines are blurred between white collar and blue-collar work. In the past there was a clear distinction between mind and muscle jobs, and salary or wage differentials were substantial. In the modern work environment, information processing and programming are nearly ubiquitous for jobs ranging from top management down to the loading dock. A skilled machinist, welder or programmer, two or three years on the job can easily break a $100,000 in annual compensation while contemporaries in the banking industry may be earning less with less job security.

Federal departments, prominent national foundations, and the entrepreneurial response to the growing divergence in open jobs and qualified candidates has been to advocate for the need for increases in both higher education attainment *and* skills training. However, it is no longer the case that a bachelor's degree is sufficient for gaining a job. Employers are often looking for more definitive information about a job applicant in terms of experience and capabilities in addition to their academic preparation.

In summary, we are left with open jobs, insufficient training for those jobs, and employers who want a pool of applicants with a mix of academics, skills and life management. Traditionally, an adequate range of options was available from a regional community college for matriculating students and for reskilling workers or training the unemployed. Community colleges today are hard pressed to keep up with industry and to mix academic preparation and skills acquisition.

**CHALLENGE**

The workforce problem can be defined as three interconnected issues - *alignment, capacity* and *expectation* – between employers, education or training providers (colleges) and jobseekers.

- **Employers** historically have relied on community college capacity to provide occupational training to supply trained or skilled workers to fill a range of employer needs.

- **Providers**, mostly community colleges, used to emphasize either foundational academics leading to associate's degrees *or* occupational training for skilled jobs.

- **Jobseekers** or career-builders commonly self-selected into academic or occupational career prep paths, the former leading to associate degrees, but not mixing the two.

Contemporary labor dynamics, driven by the transition from a manufacturing labor base to an information labor base, have changed radically.  As a result, the connection between **employers**, **providers** and **jobseekers** has lost its traditional *alignment* while the *expectation* remains that community colleges still have the *capacity* to service employers and jobseekers.

Federal Department of Labor (DOL) stimulus funds (TAACCCT), combined with private foundation funds largely from the Bill and Melinda Gates Foundation and the Lumina Foundation, have focused on two well-funded initiatives. The first, college completion, principally community college associate degrees. The second is the quickly growing skills gap that has a direct effect on unemployment, economic recovery and growth.

The Federal skills gap funds dwarfed the college completion agenda and soon overtook it in importance once it became clear that college does not guarantee employment, though it improves applicant profiles. The 2009 American Recovery and Reinvestment Act authorized the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program. President Obama pledged two billion dollars for these grants, mostly to community colleges. By 2015 an unprecedented two billion dollars will have been granted as described below.

> *TAACCCT provides community colleges and other eligible institutions of higher education with funds to expand and improve their ability to deliver education and career training programs that can be completed in two years or less, are suited for workers who are eligible for training under the TAA for Workers program, and prepare program participants for employment in high-wage, high-skill occupations. Through these multi-year grants, the Department of Labor is helping to ensure that our nation's institutions of higher education are helping adults succeed in acquiring the skills, degrees, and credentials needed for high-wage, high-skill employment while also meeting the needs of employers for skilled workers.* www.doleta.gov/taaccct/.

It is highly questionable whether the $1.5 billion expended as of 2014 is meeting the intent of the grant program.  The reason for this has to do with *alignment, capacity* and *expectation* and with an inability to measure actual effectiveness and make corrections.

**PROBLEM**

The implicit assumption of the TAACCCT grant program, as well as the supporting national foundations that provide other funds in support of college completion and skills acquisition, is that community colleges and employers are *actually* organized or capable of carrying out such ambitious changes to their normal routines, their traditional organization or funding.

Institutional structures such as community colleges and corporations a) are not prone to change especially if externally mandated to do so,  b) do not normally combine forces with outside groups to solve larger social and economic problems, or c) alter their internal schedules, practices and financial resources.   Organizational structures are generally only flexible in certain ways. Organizational cultures become set and change is difficult, more so if it involves multiple parties.

In many cases, no amount of money applied to traditional structures will cause multiple and diverse organizations to change common practices and work together in novel ways.  *It is hard to know what theory of change more than two billion dollars granted to colleges and other non-profits would effect in a positive and efficient outcome and would organically bring employers and colleges into tight coordination to serve the new world of rapidly and accurately producing the necessary training for jobs that evolve or die continually.*

Up close, this is not a pretty picture, nor one that has clear guidance.   The Department of Labor, Department of Education and the foundations supporting the TAACCCT grants do not have the inherent knowledge to reorganize the complex cultures within community colleges that also have a traditional and hard to manage split between academic and occupational programs and often tenuous relationships with local employers. Colleges and employers do not mix well and federal agencies and national foundations do not easily acquire knowledge of organizational change models of this complexity.   Similarly, there is almost no inherent knowledge in colleges on how to work with employers to mold their job creating processes to give community colleges adequate time to acquire expertise to produce new courses.

Additionally, there are other key players who are federally designated intermediaries between employers and jobseekers.  Typically, these are workforce boards and Career One-Stops under WIA but will change under WIOA. Throughout the country, the One-Stops and other government funded organizations link, by mandate, unemployed with training to seek existing jobs. Independently of these are local and regional economic development organizations.

Also, many private job boards provide services to employers and jobseekers.  Monster.com, Craigslist, Bright, Glassdoor, eHarmony and an avalanche of other firms have entered the matching business.  Left out of both the private and government matching services is *how and where* to find the specific employer-validated training necessary to fill the skills gaps of jobseekers.  It is daunting to try to navigate either the bureaucratic thicket or the flashy marketing of the commercial sites.   The process has not been made much better by entrepreneurs seeking to automate these processes with big data scraping and matching algorithms which are often not precisely tuned or knowledgeable of local and regional realitie.

**FRAMEWORK**

There is no automatic fix for the workforce dilemma, but there are certainly ways to begin to think through solutions that rise above the enormous amount of well-meaning programs from government, foundation circles and businesses.  The funds that have been expended with the expectation that employers, colleges and jobseekers will automatically reorganize themselves for the information economy to fill its many skills gaps is wishful thinking.

If the goal is to create meaningful solutions to workforce dilemmas a great deal of work is necessary to a) lay the foundation for this transformation across *and* inside the traditional silos, b) to analyze the problems inherent in each organization or institution and between them and c) to begin to design and develop the type of tools and technology that are easy-to-use, employer validated and can be externally tested.  *For all the funds expended, there has been very little user-friendly technology solutions developed that are similar to what consumers use daily.*

The TAACCCT grants in the last round required evaluations, data collection and warehousing of open source content, courses and other material.  This is fine as at objective level, but does little to change practice where it counts in community colleges with employers and between them.  Nor does it write the workforce boards into this equation or provide the public information necessary for jobseekers to navigate in these confusing waters.  If results are needed, then the foundation for discussion, the analysis of the problems and the possible technology and process designs and development to address these problems must start inside a well-defined framework for change including the issues of *alignment*, *capacity* and *expectation*.

- **Alignment**: Is there alignment between the "demand," the employer's specific training needs, and the "supply" of training available at community college that can be readily found and learned of by jobseekers?  *Does this alignment include the federal, foundation and workforce organizations?*

- **Capacity**:  Is there the capacity, the will and management capability at the community college to respond to the employer's specific training needs?  Correspondingly, is there the capacity with employer to define the training needs early enough to give time for the college to respond appropriately? *If not, on either of these, where could this guidance, process and technology reliably come from?*

- **Expectation**:  Are expectations aligned between the demand and supply?  Expectations can vary tremendously between employers and colleges, and also between government agencies, foundation grantors, and workforce boards.  *What type of organization or process could manage and shared set expectations?*

The only way the workforce dilemma can be solved is through well-developed intermediary processes that are likely driven by new software solutions and common technical standards that boundary-span between the stakeholders. These can be managed collaboratively, offered by third parties, or are driven by market forces whose interests and incentives are the production of more employees who can succeed.

## RECOMMENDATION

The newly enacted Workforce Innovation and Opportunity Act, WIOA, provides a great deal of potential efficiency around issues of alignment of state and regional training and the capacity of providers to produce the needed training.

However, a Federal law and regulations often has little to do with how change occurs between components of the education and labor sectors in society.

This is why it is believed that separate funds and R & D and piloting activity must be focused on unified and unifying solutions within the labor cycle that characterizes the process from employee need, training provided, and job procured by a jobseeker.

The use of TAACCCT funds and NSF ATE programs can provide a fertile ground for experimentation and R & D between employers, colleges and workforce boards and One-Stops. But this can only happen if there is combined and joint intent and the will to upend traditional practices.

It goes without saying that the type of modern systems needed is far beyond the scope of most community colleges, employers and workforce agencies. Likewise, the developers of commercial solutions often do not have the sales cycle time to develop product to work between these stakeholders.

Therefore, it is recommended that R & D funding to link stakeholders through one or more of the stages outlined above should be made a national priority. Similarly, software development making these links must be tested and become the ground where pilots and experiments are conducted.

> **PART TWO OF THE WORKFORCE DILEMMA WILL FOCUS ON FRAMEWORKS AND A RANGE OF SOLUTIONS TO THE CURRENT LACK OF ALIGNMENT BETWEEN EMPLOYERS, PROVIDERS, AGENCIES AND JOBSEEKERS.**

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