



The JFF "Credentials That Work" initiative mines real-time labor market data to help colleges design training programs.

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Data on Demand

New Technologies Provide Real-Time Labor Market Info To Colleges

By Paul Bradley

It is the question bedeviling community colleges, employers and workforce development programs around the country as it struggles to emerge from an historic and persistent economic downturn: Does the training that colleges are providing actually lead to job placements and careers?

Colleges long have worked with local employers and work-

force development boards, crunching numbers, identifying trends and trying to align course offerings to meet the needs of their local labor markets.

But the efforts of colleges have been hampered by a lack of detailed, up-to-date information about the occupations, skills and credentials that are in immediate and long-term demand.

Now, under an initiative being

spearheaded by Jobs for the Future, a Boston-based think tank that identifies, develops and promotes education and workforce strategies, a new tool for colleges is taking shape – computer technology that can mine, aggregate, and analyze real-time job market data available on the internet to identify important employment trends.

Called "Credentials That

Work," the initiative is rooted in new technologies that make it possible, for the first time, to collect and analyze real-time labor market data. Rather than relying on data that may be out of date and inaccurate, JFF says, new artificial intelligence technologies have the potential to transform how colleges align their training programs with the needs of the economy.

The initiative comes at a time when unemployment remains stuck at more than 9 percent, even as employers say they are having trouble finding qualified workers to fill skilled positions. That trend is expected to grow. By 2018, 70 percent of all jobs will require workers with some form of post-secondary credentials, according to forecasts.

John Dorrier, who leads JFF's

work in the development and application of labor market information and workforce research, said the availability of real-time labor information is one of the most significant developments he has seen in a 30-year career of analyzing labor markets.

"Most of the labor data we use today is very good at looking in the rear-view mirror," he said. "We have a very good idea of what happened and why. We do a good job at long-term forecasting. But what happened in the past does not necessarily tell us what will happen in the future. Historical data is important, but the void that can be filled by real-time data is an important one."

Better Alignment

"If colleges expect to attract more students and graduate them prepared for sustainable careers, they must better align program offerings and course curricula to the needs of their local labor markets. Decisions on which programs to offer, and what to teach in class, should correspond to employers' immediate and ongoing demand for workers in a particular occupation or with a specific set of skills."

JFF has enlisted ten community colleges into a "Credentials That Work" network and given the schools the technological tools to help them identify local labor trends and adjust their curricula accordingly. The colleges started using the technology last month. The initiative is being funded by grants from the Joyce Foundation and the Lumina Foundation for Education.

In about a year, JFF hopes that the initiative will yield data on how colleges are using the new technology to examine local labor markets, how they use the newly-mined data to respond to market needs and to what extent colleges use the information to change and adjust their course offerings.

The initiative represents a concession to the fact that "help wanted" ads have migrated from the pages of newspapers into the world of digital technology – think monster.com, careerbuilder.com or dozens of other online job boards. The technology being used by colleges, developed by Burning Glass Technologies, can aggregate and analyze online job ads and provide a more comprehensive, "real-time" source of information about the hiring and skill needs of local employers.

The technologies make it possible to draw data from a larger and more recent pool than most traditional sources of labor market information, Dorrier said. They can improve the understanding of hiring trends, employer demand and skill requirements by drawing on current information and consistent signals from the labor market.

Some regions and states already are using technology to identify real-time trends in labor markets. The New Jersey Council of County Colleges Consortium for Workforce and Economic Development has partnered with that state's labor department to identify training opportunities for occupations with significant hiring opportunities.

Labor officials had been scraping and spidering the Internet to identify fields ripe with job opportunities, producing reports on the top 25 occupations with job openings, and the real-time intelligence caught the attention of the county college consortium. The consortium soon was mining labor data every month. It has become an important, dynamic tool for the colleges, part of an effort to move the unemployed into jobs.

Top IT Skills Identified In Job Ads, January-March 2011

An example of real-time labor market information can be found in the work of the Northeast Consortium, which is measuring demand in several industry sectors, including information technology. The analysis found that data warehousing is the most common skill requirement sought by online IT job advertisements:

Databases and data warehousing	24%
Network administration and security	12%
Programming, development and engineering	19%
Software testing and quality assurance	2%
IT support	3%
Web design and technologies	13%
Business intelligence	17%

SOURCE: JOBS FOR THE FUTURE

ISO Real-Time Data

Ten community colleges are using new technology to mine real-time labor market data through the Credentials that Work initiative.

They are:

- Cabrillo College (Aptos, Calif.)
- Cerritos College (Norwalk, Calif.)
- Gateway Community and Technical College (Covington, Ky.)
- Harper College (Palatine, Ill.)
- Kentucky Community and Technical College System Office (Versailles, Ky.)
- LaGuardia Community College (New York, N.Y.)
- Owensboro Community and Technical College (Owensboro, Ky.)
- Southeast Kentucky Community and Technical College (Harlan, Ky.)
- Southern Maine Community College (Portland, Maine)
- Texas State Technical College (Waco, Marshall, West Texas, and Harlingen, Texas)



The Credentials That Work initiative by Jobs For The Future seeks to identify professions with job openings so colleges can design appropriate training programs. Here, land surveying student Jolene Hoffman works on a lab on the campus at Great Basin College in Elko, Nev.

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Customized Training

According to a JFF report, "once potential leads have been identified, the consortium's jobs developers contact the employers listing the jobs. The developers validate the job openings and determine whether the employers are having a hard-time finding qualified workers. This process has eliminated from contention seemingly hot jobs, like IT jobs, which are flooded with out-of-work applicants. If enough employers express a need for workers in a particular occupation, the consortium develops a customized training program geared toward preparing unemployment insurance recipients to fill open jobs."

Robert Bowman, the consortium's executive director, said employers are involved in verifying skill requirements, designing curriculum and screening potential employees. So far, about 100

unemployed workers have been trained for jobs as electronic technicians, electromechanical engineering technicians, bank tellers and health care workers. The overall placement rate is near 80 percent. More recently, the consortium recently found a need for entry-level metal fabricators in parts of the state. It has enlisted companies and potential workers. Colleges are now in

the process of developing curriculum.

"We are tying the new training programs to what we find in the data," Bowman said. "What this does is really link the employer with the college. The faculty is involved. The business community is involved. The Department of Labor is involved."

"One of the things we found is that it is the little guys that are hiring, the companies with 75 to 100 employees. You really have to mine this data. You have to get in the weeds and figure it out."

The analysis of online job ads has its limits. JFF reports that job openings in retail, food service, construction and building maintenance are undercounted online; those jobs are filled by other means. Also, in the world of online job advertising, duplication is a problem. Technology must be capable of eliminating the duplicates to come up with a full and accurate picture of labor markets. Extracting job requirements such as education and experience also has proven difficult since many employers don't specify them in online ads.

In any event, the real-time data is intended to complement, and not replace, other ways that community colleges identify labor market needs. While real-time information can identify immediate needs, government statistics can offer a broader assessment of things such as economic conditions and earnings. Community colleges will still be required to reach out to local businesses and industries to discern their employment needs.

"By taking such a comprehensive approach to analyzing their local labor markets, community colleges can tailor programs and course content to their markets and ensure that students are prepared to build marketable skills in growing careers," the JFF report said. ▲

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Can real-time labor market data assist colleges in designing courses that will lead to jobs and careers?

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