

SUCCESS IN REAL-TIME

USING REAL-TIME LABOR MARKET INFORMATION TO BUILD BETTER MIDDLE-SKILL STEM PATHWAYS

By Ian Rosenblum and Christopher Spence | JANUARY 2015



The relationship between education and economic opportunity has never been stronger than it is today—with employment and wages directly proportional to Americans' levels of education and training.¹ This reality is creating deep, troubling and persistent income and wealth disparities between those with access to successful postsecondary education, and those without.

The gap that separates so many workers from the prospect of good-paying, stable jobs demands urgent action by states—even as the unrelenting fast pace of economic change makes a sound response all the more difficult as the “rules of the game” are dynamic and continue to evolve. This is especially true in the Science, Technology, Engineering and Math (STEM) fields, where rapid growth holds the potential for significant employment gains while a skills gap holds back would-be workers from the employers who seek their talents.

Recent research dispels many misperceptions about STEM, and points to the great potential of so-called “middle-skill” STEM jobs to fuel economic growth and create pathways to stable jobs and solid wages for many

more Americans. The Brookings Institution's 2013 report on *The Hidden STEM Economy* estimates that 26 million jobs require a high level of STEM knowledge and that half of all STEM jobs require less than a Bachelor's degree. These middle-skill STEM jobs pay an average of \$53,000, approximately 10 percent higher than jobs with similar educational requirements.²

By taking urgent action, states have the opportunity to level the playing field and create more equitable educational and career outcomes. But given the fast-changing pace of STEM fields, middle-skill STEM jobs can only be a source of opportunity if states and their workforce and education partners are targeted in their approach. Community colleges need to be sure that their programs educate students for STEM jobs that offer a family-sustaining wage, target jobs that employers are actually trying to fill, and teach the skills that workers need.

Real-time labor market information stands at the intersection of these trends and can play a powerful role in meeting the need for an alignment process for

¹ Baum, Sandy. 2014. *Higher Education Earnings Premium: Value, Variation, and Trends*. The Urban Institute. Washington, D.C. Accessed October 2014, at <http://www.urban.org/UploadedPDF/413033-Higher-Education-Earnings-Premium-Value-Variation-and-Trends.pdf>

² Rothwell, Jonathan. 2013. *The Hidden STEM Economy*. Washington, DC: The Brookings Institution; See also Change the Equation. Vital Signs: Reports on the Condition of STEM Learning in the U.S. Accessed October 4, 2014, at [http://changetheequation.org/sites/default/files/CTEq_VitalSigns_Supply%20\(2\).pdf](http://changetheequation.org/sites/default/files/CTEq_VitalSigns_Supply%20(2).pdf).

the modern economy—and especially for the middle-skill STEM careers that hold so much potential for the nation’s future. By providing a window into the dynamic needs of employers—the knowledge, skills, experience, credentials and other assets they seek while hiring—real-time labor market information (LMI) gives states and their community colleges the ability to keep up with labor shifts and better prepare their citizenry for exciting career opportunities and advancement.

Drawing on best practices from states, college systems and individuals institutions, the following recommendations offer a framework for supporting the use of real-time LMI as community colleges build pathways to completion in middle-skill STEM fields.

Recommendation 1: Implement real-time LMI as a long-term change management strategy—not a one-time tool. A state’s overall approach to labor market information should position real-time LMI not as a tool for one-time decision-making—which would be quickly outdated—but rather as the bedrock of a long-term strategy for linking employers, community colleges, workforce systems, economic development agencies and other stakeholders to ensure the ongoing alignment of a state’s education and training systems.

Recommendation 2: Make real-time LMI available and usable by community colleges and other stakeholders. States should consider ways to serve as a coordinator, convener and/or contractor on behalf of their community colleges to access third-party real-time LMI. State action can include evaluating and sharing information on vendors, creating common standards of use, establishing model Requests for Proposals and contracts, and/or setting up a single statewide contract with multiple end users.

Recommendation 3: Strengthen state-level data systems to support real-time LMI. States should create seamlessly linked data systems that follow students from pre-kindergarten into the workforce, with particular emphasis on incorporating real-time labor market information and providing the kinds of data that will be most helpful for aligning education and training programs. Data that follows students from educational programs into the labor market is especially important for middle-skill STEM fields, which are often marked by fast-changing technological advances and employer needs, and thus require a mechanism that ensures education programs and their graduates are keeping pace.

Recommendation 4: Support institutions’ use of real-time LMI through technical assistance and professional development. To implement successful strategies that develop and align middle-skill STEM pathways using real-time labor market information, states must help community colleges create capacity and knowledge among key stakeholders. States should complement an overall vision that embraces and directs the use of real-time labor market information in education and training systems with practical and comprehensive efforts to provide technical assistance, professional development and other critical supports—including financial resources.

Recommendation 5: Integrate real-time LMI into critical ongoing decision-making. The first four recommendations address how states can establish the context and conditions for successful use of real-time labor market information; the final—and crucial—step is to ensure that LMI is integrated throughout key decision-making at the state, system and institutional levels. States should articulate clear expectations and develop policies and incentives to ensure that real-time LMI is incorporated into program evaluation, curriculum evaluation, employer engagement, institutional strategic planning, and student-facing supports and services, including advising.

Full report available at: <http://www.jff.org/publications/success-real-time-using-real-time-labor-market-information-build-better-middle-skill>

