

## Report on Successful K-12 STEM Education (Continued From the Oct. 6 OVAE Connection)

After considering the effects on STEM education of the various ways of organizing STEM schools and comprehensive schools, the committee that prepared the report [Successful K-12 STEM Education](#) for the National Research Council turned its attention to instruction and school practices because “a larger body of rigorous evidence is available on practices that are associated with better student outcomes, regardless of whether students are in a STEM-focused school or in a regular school.” While many of those practices were studied separately or in individual classrooms, the committee concluded that “it may be possible to improve STEM education for all students by combining successful practices and implementing them school wide.” The committee was seeking to identify the practices—rather than the outcomes—that could be used to identify effective STEM schools.

Drawing on several available studies, the committee found that (1) instruction capturing the interest of students and involving them in STEM practices and (2) school conditions supporting STEM instruction were the two fundamental aspects of practice likely to be found in successful schools.

With regard to effective STEM instruction, the committee engaged in a lengthy description of the last 20 years of research. Very briefly, the committee found that “effective instruction capitalizes on students’ early interest and experiences, identifies and builds on what they know, and provides them with experiences to engage them in the practices of science and sustain their interest.” With regard to mathematics, the committee concluded that “research shows a clear link between what students are expected to learn and mathematics achievement. At a given grade level, greater achievement is associated with covering fewer topics in greater depth.” This is an inadequate summary of a rich discussion of STEM instruction. Readers will find a careful reading of this section of the report worthwhile.

When it turned to school conditions and cultures that support learning, the committee found that “[s]trong teachers and focused, rigorous, and coherent curricula are certainly important factors to improve student learning in STEM.” Even so, conditions in schools and their surrounding communities also have a substantial effect on what is taught, how it is taught, and with what results. According to the committee: “Research suggests that although teacher qualifications matter, the school context—its culture and conditions—matters just as much, if not more.”

Much more research is needed, however, according to the committee. “Additional research is needed on the effects of STEM teacher professional development on student achievement and on which elements of school culture contribute to STEM learning, particularly in schools serving low-income and minority students who are underrepresented in the STEM majors and careers.”

## Grant Competition for Technology-Enabled Innovation at the Secondary and Postsecondary Levels

[Next Generation Learning Challenges \(NGLC\)](#) has announced the availability of \$12 million in grants for comprehensive models that apply technology to personalize students’ learning experiences, thereby improving the speed and depth by which they develop and master critical knowledge and skills. The funded programs will focus on breakthrough models for both college readiness and completion. It includes two separate requests for proposals: one addressing grades 6-12 and one targeting postsecondary education (including two-year and four-year degree programs). NGLC is seeking approaches that can help all students—but especially low-income students and students of color—to develop the skills and knowledge necessary to lead productive lives. Initial applications will be accepted on a rolling basis from Oct. 5, 2011 through June 8, 2012. More information about the grant program, including the RFP and dates for upcoming informational webcasts may be found at [www.nextgenlearning.org](http://www.nextgenlearning.org).

## Increasing Degree Completion for Adult “Stop-Outs”

A recent [Inside Higher ED](#) article covered a meeting held by the Institute for Higher Education Policy ([IHEP](#)) to discuss adult learners who are near-completers, ready adults, or stop-outs, those who have earned most, but not all, of the credits they need for a college degree and strategies to assist them in completing their degrees. The meeting was intended to elevate the discussion to the national level, and bring cohesion to the groups working on this issue.

[Project Win-Win](#), one of the initiatives highlighted and the results of a partnership of IHEP and the State Higher Education Executive Officers, involves 64 community colleges and four-year institutions authorized to award associate’s degrees. It is funded by the [Lumina Foundation for Education](#). The project is engaged in identifying former students who are no longer enrolled and were never awarded a degree and whose records qualify them for an associate degree and getting those degrees awarded retroactively. These institutions also identify former students who are academically short of an associate degree and seek to bring them back to complete the degree. To date, institutions have identified over 44,000 students and completed degree audits on 12,000 students (2,800 deemed eligible for associate awards, 6,200 potential completers, and 3,000 neither). This effort moves toward meeting the degree completion goals set by the Lumina Foundation for Education, the nation’s governors, and the Obama administration.

## Opportunity

**Got a great initiative going in your program for workforce innovation? Share it! Visit the national blog and add your ideas at**

**<https://innovation.workforce3one.org>. See the second page of this issue to learn how to get involved.**

## WELCOME TO THE NEW INNOVATION FORUM!

Our three agencies have joined together to demonstrate our commitment to fostering workforce innovation. We are impressed with the ingenuity that the workforce system and its partners in adult education and human services demonstrated through the American Recovery and Reinvestment Act. We noted how you responded with passion and creativity to the unprecedented demands on our respective systems. We applaud your efforts to leverage new technology to enhance services to both jobseekers and employers; improve service delivery efficiencies to support better training, education, and employment outcomes at lower costs; and partner with each other to integrate services.

This Innovation Forum offers an important opportunity to share your experiences and novel ideas:

- Forging partnerships to provide services to jobseekers in a vastly-changed national labor market in which millions of workers have been dislocated from traditional industries and need new skills to compete;
- Educating and training a workforce equipped with foundational literacy and numeracy skills that are critical to success in gaining industry-recognized credentials and postsecondary education; and
- Inventing new ways to leverage resources and design services that are cost-effective, demand-driven and high impact across programs and funding streams.

We hope you will use this space to explore new ways to build on your pioneering efforts by discussing innovative approaches to transforming systems, changing service strategies and investing and leveraging funds in new ways.

**OUR GOAL FOR THE INNOVATION FORUM is to generate transformative, innovative ideas that will lead to measurable improvements in outcomes, such as:**

- Helping job seekers get jobs, especially **disadvantaged and displaced job seekers**;
- Meeting **employer skill needs**;
- Helping customers earn quality **credentials** quickly; and
- **Delivering services** efficiently to maximize resources.

We ask that while you go about your day-to-day work of serving customers, managing projects, meeting deadlines, and thinking about the bottom line, you take a moment to consider the challenges you are facing and how you are innovating to address them. This is what we want to hear about! And, when you have a moment, we hope you will use this Forum to **SHARE** your best thinking!

We hope this Innovation Forum will allow you — our thought leaders, practitioners, researchers, partners, and stakeholders of the workforce system — to share your experience and discuss how new and innovative policies, administrative structures, partnerships, service delivery strategies, outcome measures, technologies, procurement strategies, and more can help us improve outcomes for our job seeker and employer customers.

**TO GET THE DIALOGUE GOING**, we are inviting you to share your insights on innovation as bloggers and discussants on the Innovation Forum. Here are three ways you can participate:

**Write a blog post:** Have an insight on innovation that you're ready to share? Then we invite you to write a brief 100 — 400 word blog post and send it to [Workforce.Innovation@dol.gov](mailto:Workforce.Innovation@dol.gov). We'll let you know that we've received it and tell you the date it will be published on the Innovation Forum. Not sure how to get started? Consider using one of the questions below as your writing prompt.

- Is there an aspect of the public workforce system that is particularly "ripe" for innovation?
- How is your work changing, and how are you innovating to respond?
- What is your one greatest legislative, regulatory, funding or performance barrier to innovation and why?
- What is the one most important thing the public workforce system can do to improve outcomes for job seekers and employers?
- Where do you see innovation in the workforce system?

**Comment on blog posts:** No one wants to talk into a vacuum! Encourage your colleagues by commenting on their ideas using the comment feature on each blog post. Commenting is a great way to build on the ideas and questions raised and provide additional thoughts and reactions. Your insights help others learn. Encourage each other!

**Tell a colleague:** Is there a voice you'd like to add to the conversation? Then forward this message, and encourage them to join the discussion at <https://innovation.workforce3one.org>.

*Thank you for your hard work and we look forward to hearing your **INNOVATIVE THOUGHTS**.  
Now, let the conversations begin!*

*Jane Oates, Assistant Secretary for Employment and Training, Department of Labor  
Brenda Dann-Messier, Assistant Secretary for Vocational and Adult Education, Department of Education  
Mark Greenberg, Deputy Assistant Secretary for Policy, Administration for Children and Families, Department of Health and Human Services*

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