

If you are unable to see the message below, [click here to view](#).

June 2010

Research and Innovation in Learning

## Research Update

Center for Technology in Learning



### SRI Develops Large-Scale Science and Math Assessment Tasks Using Evidence-Centered Design and Universal Design for Learning

SRI is designing, authoring and validating science and mathematics tasks based on the principles of evidence-centered design (ECD) and universal design for learning (UDL). Based on several projects in the Center for Technology in Learning and the Center for Education and Human Services, SRI staff engaged experts in five state departments of education in a co-design process resulting in newly developed or revised assessment tasks. These tasks are designed for use in large-scale, standards-based assessments; formative assessments; and portfolio-based performance assessment systems. Products include:

- mathematics and science assessment tasks,
- re-usable templates to promote future task design, and
- procedural guidelines that outline the development process.

The tasks have been designed for general education students, students with high incidence disabilities and those with significant cognitive disabilities. The newly developed tasks are designed from the outset with attention to multiple means of perception, expression, cognition, language and symbol use, executive functioning, and engagement and address how diverse learners recognize, strategize, and engage in testing situations. [Learn about UDL-infused assessment items.](#)



[Learn More About UDL- Infused Assessment Items](#)

---

### SRI Designs and Validates Assessments for Community College Educators

The [Scenario Based Learning \(SBL\)](#) project, sponsored by the National Science Foundation, developed classroom assessments of workforce students' application of technical knowledge and use of 21st-century skills to solve problems. SRI partnered with the Foothill-De Anza Community College District to co-design dozens of assessments using evidence-centered design. In addition, SRI developed a professional development module and tools to support instructors in designing assessments. SBL will be featured in the *Handbook on Measurement, Assessment, and Evaluation in Higher Education* (Routledge).

Another SRI project, [Domain-Specific Assessment: Bringing The Classroom Into Community College Accountability](#), applies cognitive science to program assessment in undergraduate biology and economics. Domain-Specific Assessment seeks to measure student progress in learning to reason about

a variety of problems in specific domains. This work for the U.S. Department of Education examines how students organize knowledge around ideas that experts use for efficient information processing. Learn more about SRI's work in [Community College Research](#).

---

### CTL Highlights:

- Preschools are still using lessons obtained from the 2009 [Ready to Learn study](#), according to initial follow-up interviews. Researchers are surveying all study classes now to assess longer term impacts of the study on schools and teachers. Ready to Learn recently garnered a coveted "[consistent with evidence standards rating](#)" from the What Works Clearing House who described it as a "well-implemented randomized control trial."
- The Noyce Foundation is funding the full scale up of the [Build IT](#) program, developed by the Center for Technology in Learning and Girls Inc., in the Girls Inc. network of affiliates that reach more than 800,000 girls annually.
- CTL's Mingyu Feng and co-authors win Best Journal Paper of the Year from the User Modeling and User Adaptive Interaction Journal for the article, "[Addressing the assessment challenge in an online system that tutors as it assesses.](#)"

### American Educational Research Association (AERA) 2010 Conference Highlights

- Nicole Shechtman delivered the talk "[Productive Dispositions for Math Teaching: An Exploratory Study of Adaptive Expertise.](#)" The talk focused on an exploratory study with 36 middle school math teachers. The study used an operational framework to measure "adaptiveness in teaching" and examine its relationships to student achievement, teacher mathematical knowledge, instructional goals, and key dispositional constructs.
  - Linda Shear and Corinne Singleton led a symposium to report results of the global/local evaluation of Microsoft's Innovative Schools Program, with participation from research partners in four countries (Ireland, France, Hong Kong, and Canada). Read the full report [The Microsoft Innovative Schools Program: Year 2 Evaluation Report.](#)
- 

### Don't Miss Our September Research Update Featuring SRI's Work with Scientists and Engineers in K-12 schools

[Learn](#) more about SRI's work supporting and studying partnerships between scientists and engineers and K-12 schools. SRI developed criteria for selecting resources that will support professionals working in classrooms on hands-on activities, reviewed existing resources, and recommended a set for use by scientists and engineers in the National Defense Education Partnership.

---

If you have received this newsletter from a friend or colleague and would be interested in receiving your own CTL Research Update, [please subscribe here.](#)

---

SRI International ([www.sri.com](http://www.sri.com)) is an independent, nonprofit research institute. The mission of SRI's Center for Technology in Learning (CTL) is to improve learning and teaching through innovation and inquiry. Much of our work is conducted in educational settings such as classrooms, after-school programs, and teacher education programs. Visit [ctl.sri.com](http://ctl.sri.com).

SRI International  
333 Ravenswood Ave.  
Menlo Park, CA 94025  
[www.sri.com](http://www.sri.com)

---