

Heidi H. Haugen, Cal TAC Chair, Florin High School

CAL TAC MEMBERS 2013-2014

- Cal TAC is comprised of a competitively selected group of award-winning, highly accomplished teachers from across the state who provide greater opportunities for students to engage in STEM.
- Leveraging the talents and ideas of these members is part of what I hope becomes a Cal TAC legacy.









Heidi Haugen, Chair

Susan Kunze Marilyn Garza

Arthur Lopez

Jeff Bradbury



Darrel James

Osvoldo Soto Katherine Ward



Andy Kotko, Vice Chair



Roy Mason



CAL TAC – BRIEF BACKGROUND



- Created in 2005 by the California Council on Science and Technology
- Brings a much-needed connection between the classroom, education leadership, policy and research communities
- Focus on high-quality teaching within the STEM disciplines
- Digitally enhanced education (DEE) has arrived in the nation's classrooms, but its scope, implementation, and impact have been neither evenly distributed, nor systematically tallied and researched or well understood. In addition to the symposia series, Cal TAC has completed work on a "tool kit" of selected DEE leadership documents and other resources for members of the education, policy, and philanthropic communities as they make future investments in this crucial yet still murky realm.



WHERE WE HAVE BEEN 2013-2014

- Cal TAC Meeting February 11, 2013 Sacramento The Efficacy of Digital Teaching and Learning Symposium-Planning, development, & building of the ToolKit and QUICK
- Symposium on the Efficacy of Digitally Enhanced Education in California May 24, 2013, UCDavis
- Symposium on the Efficacy of Digitally Enhanced Education in California II September 13, 2013, California Department of Education, Sacramento, CA
- **STEM** is Everywhere, February 9-12, 2014, Irvine, CA
- Out-of-School STEM Learning: A National Summit [National Research Council Board on Science Education, June 3-4, 2014 Washington, DC
- NRC Convocation on Professional Empowerment of STEM Teachers, June 5-6, 2014 Washington, DC



DIGITALLY ENHANCED EDUCATION

- Symposium Reports
- Resource Guide
- QUICK Assessment Tool
- **Gooru-CCST-**Cal TAC Library [Art Lopez & Jeff Foote]



PARTNERSHIPS & COLLABORATIONS

Gooru in the Classroom & Cal TAC Library



Learning is Social

- Provide feedback to and collaborate with the National Academies Teacher Advisory Council
- **CSLNet, Graphite, etc.**

Exploring ways to leverage networks interms of best practices



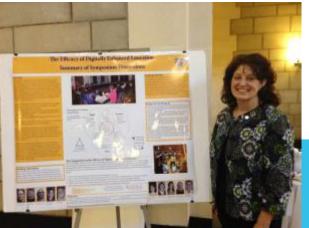
California STEM Learning Network



CONGRESSIONAL & EXECUTIVE BRANCH OUTREACH

- Out-of-School STEM Learning: A National Summit–Poster session
- NRC Convocation on Professional Empowerment of STEM Teachers & NTAC meeting
- NSF, California Institute for Federal Policy Research Funding Lunch Briefing, California delegation briefings







QUICK Assessment For Educational Digital Resources		
PRINCIPLE	EVIDENCE	MY RATING
Q UALITY OF THE RESOURCE	The resource: Is valid and reliable Functions as described Is well designed, easy to use, and works properly Provides materials that are comprehensive and easy to understand	
USER-FRIENDLY	 The material: Is accessible to all students Offers a variety of ways for students to use the materials Has a range of cognitive demands appropriate for my students 	
INTEREST OF STUDENT CAPTURED AND MAINTAINED	The material: Holds my students' interest Invites creativity and innovation Encourages self-direction 	
CCSS & NEXT GENERATION SCIENCE STANDARDS (NGSS) ALIGNMENT	 The material directly addresses the content and practices of the CCSS and NGSS standards Assessments are clearly aligned to CCSS/NGSS performance expectations 	
KNOWLEDGE AND SKILLS CONTENT	 The content: Is purposeful and directly related to my students' learning Promotes deeper thinking, understanding, and reasoning Is engaging, clearly written and accurate Clearly identifies the main ideas and purpose of the lesson 	

RATING SCALE:

California Council on Science and Technology's (CCST) Cal TAC QUICK Assessment was designed as a tool for teachers who wish to rapidly assess the potential of a digital resource. Some may wish to indicate the extent to which the resource addresses the Principles and Evidence by making a simple check or other mark while others may be more comfortable with a scoring rubric such as:

- 3: Excellent potential
- 2: Solid potential in most areas
- 1: Mixed potential
- 0: Little or no potential

There is no single way to use the QUICK. We encourage teachers to experiment with this tool and its rating strategy to discover what works best for them.

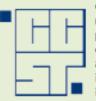
QUICK Assessment For Educational Digital Resources

- Educational technologies are entering our education systems at a remarkably fast pace, and thousands of teachers are often left on their
 own to decide which, if any, digital resources will effectively enhance instruction and advance their students' learning.
- To address this need, members of the California Council on Science and Technology's (CCST) California Teacher Advisory Council (Cal TAC) offer this tool for teachers and other educators to help guide the selection of appropriate digitally enhanced resources.
- It is not meant to take the place of more comprehensive assessment systems for evaluating the effectiveness of digital platforms, apps, and resources, but rather provides a "quick" screen of *prospective* quality and utility of educational technology in a classroom, afterschool, or informal setting.
- Whether planning lessons, working directly with students, or in some other learning context, we hope that applying the Quick Assessment will help educators navigate this rapidly expanding area of the education landscape.
- This tool was developed with input from many classroom teachers who have tested the criteria in varying contexts; we anticipate continuing refinements will be added as its use spreads.

For those looking for ways in which to look more deeply at the effect of digital resources, many more sources are beginning to emerge. For example, please see the Rubrics for Evaluating Open Education Resources (OER) Objects (Achieve: <u>www.Achieve.org</u>), Graphite (Common Sense Media: <u>www.graphite.org</u>), and CLRN (California Learning Resource Network: <u>www.clrn.org</u>).

We would like to thank the staff and boards of the Stephen D. Bechtel, Jr. and Stuart Foundations for their interest in and support of advancing effective digital teaching and learning throughout the state.

Copyright 2014 by the California Council on Science and Technology ISBN: 978-1-930117-89-1 QUICK Assessment for Education Digital Resources



CCST is a non-profit organization established in 1988 at the request of the California State Government and sponsored by the major public and private postsecondary institutions of California and affiliate federal laboratories in conjunction with leading private-sector firms. CCST catalyzes leading experts in science and technology to engage with decision-makers with the goal to ensure California's continued leadership in science, technology, innovation, and science education. As a part of CCST, Cal TAC is a group of outstanding K-14 science and math classroom teachers that provides a voice for the STEM educator community, involving teachers in discussions of education related policy. Cal TAC produces studies and makes recommendations on issues important to STEM education and interfaces directly with teachers and policy makers.



For questions or comments on this publication contact: California Council on Science and Technology 1130 K Street, Suite 280 Sacramento, California 95814 (916) 492-0996 – <u>ccst@ccst.us</u> <u>ccst.us/ccstinfo/caltac.php</u>

PUBLICATIONS

Assessing the Effects of Digitally Enhanced Education: Summary of Symposium Discussions (Sept 2013) Summary document of Cal TAC Summit held at the University of California, Davis on the efficacy of digitally enhanced education (May 2013).

The Efficacy of Digitally Enhanced Education: Summary of Symposium Discussions (March 2014)

Summary of discussions from California Teacher Advisory Council (Cal TAC) convened symposia held at the California Department of Education on September 13, 2013.

Digitally Enhanced Education: A Resource Guide for Learners and Leaders (August 2014)

As part of the report to the legislature, CCST and Cal TAC developed the *Resource Guide* (An examination of digitally enhanced education in California's schools) comprised of samples of DEE-related leadership documents and references that can serve as sources of information for members of policy, education, business, and philanthropic communities as they work together to shape and support technology's increasing role in student learning.



See additional publications at: http://www.ccst.us/publications/Cal%20TAC%20index.php

CAL TAC – THE FUTURE

Building on Accomplishments of Past

- Partnerships/Collaborations (best practices)
 - Gooru
 - CSL Net
 - Common Sense Media/Graphite
 - West Ed

Exploring Opportunities for the Future

- Policy Engagement/CCST Education Fellows
- Expanding Cal TAC cohort
- Engaging & Leveraging Cal TAC Alumni



