Welcome!

Webinar Series hosted by NASA Innovations in Climate Education, at Langley Research Center in Hampton, VA.

http://nice.larc.nasa.gov

Part of NASA’s Minority University Research & Education Program (MUREP)

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ADVANCING A COMMUNITY OF PRACTICE AMONG SCIENCE, TECHNOLOGY, ENGINEERING AND MATH (STEM) EVALUATORS:

THE STEM EDUCATION AND WORKFORCE DEVELOPMENT RESEARCH AND EVALUATION COLLABORATIVE

THE STEM EDUCATION AND TRAINING TOPICAL INTEREST GROUP OF THE AMERICAN EVALUATION ASSOCIATION

Sam Held, Oak Ridge Institute for Science and Education
Jack Mills, Independent Evaluator
Ann Martin, Langley Research Center, NASA
Kimberle Kelly, University of Southern California

STEM Webinar
August 15, 2013
Overview

- Who we are
- Why we decided to form a TIG / Collaborative
- Upcoming launch at AEA 2013 in Washington DC
- Resources and Connections for Further Exploration
- Opportunities for Your Participation
- Who are you?
- Feedback…
Who we are

TIG Chair: Kimberle Kelly
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Program Chair: Jack Mills
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Webmaster: Ann Martin
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At-Large Member: Sam Held
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Introducing the STEM Education and Training TIG of the American Evaluation Association

- preK-12 Educational Evaluation
- Assessment in Higher Education
- Other (out of school time, workforce and training, etc.)
- Multiethnic Issues in Evaluation
- Research, Technology, & Development Evaluation
Introducing the STEM Education and Training TIG of the American Evaluation Association

We are a network of professionals that share a common interest and experience in program evaluation of STEM programs that train and/or educate the current and next generations of the STEM workforce.

Current TIG Membership: 172 members

We support the community of STEM education and training-focused evaluators by providing a forum to share methodologies and issues relevant to the programs and communities that are part of our evaluations.

The TIG also provides an avenue for papers, panels, and talks to be presented at the American Evaluation Association annual meeting. This eases the process of finding talks related to STEM programs across multiple related TIGs.
Our Purpose: To create a community of practice among STEM education and training evaluators that is forward-thinking in its approaches to evaluation and inclusive in its responses to the experiences of STEM evaluators.

Our Values: We believe that the professional practice of evaluation within STEM should reflect the standards of excellence and guiding principles of the American Evaluation Association, including high quality, efficient, ethically defensible, and culturally responsive evaluation that leads to program improvement and organizational effectiveness for the public good.

We believe that there is much to gain through a vital, self-reflective community of practice within STEM evaluation. Benefits include increased formal and informal communication, network building, collaboration among STEM evaluators, and the expansion of the STEM evaluation evidence base. Our activities will support the development of a STEM evaluation community that is inclusive, diverse, and international.

We value rigorous, responsive, and transparent evaluation practice. This TIG will focus on application of evaluation to STEM programming as well the exploration of the art and science of evaluation within the context of STEM. Through our efforts we hope to both improve the practice and status of STEM evaluation, and enhance our clients’ use of evaluation approaches and findings.
The STEM TIG received 53 abstracts for its inaugural program and 38 volunteer reviewers for Evaluation 2013.
TIG Program at AEA 2013

How to find the program:
## Two Important Events at the Conference:

<table>
<thead>
<tr>
<th>SESSION TITLE</th>
<th>SUMMARY</th>
<th>DATE/TIME</th>
<th>ROOM</th>
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<tbody>
<tr>
<td>Business Mtg</td>
<td>STEM Education and Training Evaluation TIG Business Meeting</td>
<td>TIG Business Meeting</td>
<td>Thursday, Oct 17, 7:15 PM to 8:45 PM</td>
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<tr>
<td>Panel</td>
<td>Evaluating STEM Education Programs: Common Challenges and Promising Practices From Federally-Funded Programs</td>
<td>Representatives from NIH, NASA, USDA and an NSF evaluator</td>
<td>Thursday, Oct 17, 1:00 PM to 2:30 PM</td>
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<td>Panel</td>
<td>Getting Ahead of the Curve: Evaluation Methods that Anticipate the Next Generation Science Standards (NGSS)</td>
<td>STEM evaluation methods developed and field-tested in anticipation of the NGSS.</td>
<td>Wednesday, Oct 16, 6:10 PM to 6:55 PM</td>
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<td>Panel</td>
<td>Measuring Teachers’ Fidelity of Implementation to Algebra Curricula that Emphasize Mathematical Practices</td>
<td>Measuring teachers’ instructional practices and how well they support the development of students’ mathematical thinking in states that have adopted the Common Core State Standards in Mathematics (CCSSM)</td>
<td>Friday, Oct 18, 2:40 PM to 4:10 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>Broadening Participation in STEM and Culturally Responsive STEM Evaluation</td>
<td>Theoretical model of cultural responsiveness in STEM education; evaluation of leadership development for minority STEM professionals; broadening participation in geoscience; assessing a summer institute for faculty on undergrad science ed.</td>
<td>Friday, Oct 18, 8:00 AM to 9:30 AM</td>
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<td>Multi-Paper</td>
<td>Content, Pedagogy, and Diversity: Evaluating STEM Programs Using the Values-engaged, Educative Approach</td>
<td>Assessing STEM education across the pipeline for science content, effective pedagogy and diversity concerns; attending to culture and diversity in evaluating research traineeships; incorporating multiple stakeholders in multi-site evaluation.</td>
<td>Friday, Oct 18, 4:30 PM to 6:00 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>Engaging Research Scientists in STEM Evaluation</td>
<td>Ways to evaluate the impact of programs and services on research scientists.</td>
<td>Friday, Oct 18, 1:45 PM to 2:30 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>Evaluation of K-12 STEM Programs for Teachers and Students</td>
<td>University/Middle school partnership; program to increase middle school girls’ knowledge of STEM careers; STEM teacher development using industry and other real life research settings; measures of STEM teacher professional growth.</td>
<td>Thursday, Oct 17, 2:40 PM to 4:10 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>STEM Education Initiatives - Seriously Tricky Evaluation Measures?</td>
<td>Perspectives at the local, state, regional, and national level regarding science teaching, learning and literacy.</td>
<td>Thursday, Oct 17, 8:00 AM to 9:30 AM</td>
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<td>Multi-Paper</td>
<td>Undergraduate STEM Engagement</td>
<td>Evaluations in higher education: Impact of an undergrad research experience, a neuroscience course and knowledge networks in a large engineering project.</td>
<td>Thursday, Oct 17, 4:30 PM to 6:00 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>Compared to What? Comparison Data for Evaluating Postsecondary STEM Interventions</td>
<td>Creative approaches to developing comparison data.</td>
<td>Saturday, Oct 19, 1:00 PM to 2:30 PM</td>
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<tr>
<td>Multi-Paper</td>
<td>STEM Programs at 30,000 Feet: Large-scale, Multi-Site and State Initiatives</td>
<td>Evaluating a statewide STEM initiative in Iowa, the NSF Discovery Research K-12 program and the NSF Science Technology Center.</td>
<td>Saturday, Oct 19, 2:40 PM to 4:10 PM</td>
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<td>Think-Tank</td>
<td>How do We Evaluate the STEM Composite? Building Consensus Regarding STEM Consideration, Definition, Implementation, and Instruction</td>
<td>Work done by a volunteer group of P-20 educators in New York with input into a discussion of the challenges facing evaluators in the STEM environment.</td>
<td>Saturday, Oct 19, 8:00 AM to 9:30 AM</td>
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Further Exploration

Opportunities for Your Participation

Website for TIG and Collaborative

Join the Collaborative Form

Continue the Conversation
Welcome to the STEM Education and Training TIG website!

Upcoming Event: Informational Webinar, Thursday, August 15th (1 - 2 p.m. EDT)

Join the STEM Education and Training TIG, along with NASA’s Innovations in Climate Education (NICE) project, for an informational webinar introducing the TIG. The TIG leadership will introduce themselves, preview STEM-related offerings at the AEA 2013 meeting, and share opportunities to get involved. The webinar will be held Thursday, August 15th, from 1 to 2 p.m. (EDT). Click here for more information and for WebEx/telecon connection information.

For those who are unable to attend the webinar, a recording will be made available as soon as possible - watch this space!

Join your TIG Colleagues at Eval 2013

To aid in your scheduling, we’ve put together a schedule of events and sessions sponsored by the STEM Education & Training TIG (Word Doc), as well as a detailed version including abstracts (PDF). You may also search the conference program yourself and add interesting sessions to your own custom program.

We hope all of the TIG members, or anyone interested in STEM Education and Training evaluation work, will attend our business meeting. We’ll convene in the L’Enfant room on Thursday, October 17th from 7:15 to 8:45 p.m. Come to meet the TIG leadership and to enjoy favors and food for all attendees. Our reception will be co-hosted with the PreK-12 Education TIG, so you will also have an opportunity to mingle with the membership of one of AEA’s largest TIGs.

☐ Explore the conference program
☐ Suggest resources
☐ Connect with members
☐ Announce relevant events (contact the webmaster)
Join the Collaborative

- Based on the history of this community within and beyond AEA, we’re forming an e-list for a STEM Education & Workforce Development Evaluation Collaborative. This e-list will be open to any and all evaluators, regardless of AEA membership.

- [http://tinyurl.com/STEMcollabjoin](http://tinyurl.com/STEMcollabjoin), or visit the TIG website, to fill out a form with your contact information
Continue the Conversation

✓ Join the STEM Education and Training TIG Group on LinkedIn:
  www.linkedin.com/groups?gid=4704674

✓ Contribute to the the AEA 365 blog, or organize a group contribution:
  http://www.aea365.org/blog/

✓ What other communication forums will be important or useful for the collaborative to connect with?
Opportunities for your participation

TIG Leadership
- ✓ TIG Chair
- ✓ Program Chair
- ✓ Webmaster
- ✓ What other roles do you see for the leadership team?

TIG Programming
- ✓ Annual conference program submit, organize, review
- ✓ Annual conference business meeting organize, present, host
- ✓ TIG telecommunications webmaster submit content, social networking specialists, AEA365 posts
- ✓ Training, development, or collaboration initiatives that could benefit the collaborative, such as a STEM-specific job network
  Develop, present, or solicit
On your webinar dashboard, RAISE YOUR HAND, and we will call on you to introduce yourself!

Who are You?

Name and Affiliation

The kind of work you do in STEM Education or Workforce Development
Reflect on these questions for just a few minutes.

Decide on at least one you would like to post on the chat or raise your hand to discuss on the phone. Indicate the question number first in your chat post. We might call on your to respond to your post as we go over responses to each question.

1. What would you like see at TIG/SIG business meetings during annual conferences?

2. How can our collaborative/TIG be most valuable to you?

3. What perspectives and practices will be most valuable for research and evaluation of STEM education and training programs in the coming years? Why?

4. What questions will STEM education evaluations need to address?

5. What role can AEA, our TIG, and our collaborative play in helping or influencing STEM education evaluation?

6. Would you like to get involved? What could you see yourself contributing?

We want to hear from you!
Questions, suggestions, ideas, concerns... Tell us what is on your mind about evaluation in STEM Education and Workforce Development?

On your webinar dashboard, use your chat feature or RAISE YOUR HAND to share your idea with the group.