

## Inspiring Others



### STEM equity and diversity: A Sisyphean task

By [Doug Haller](#) on May 28th, 2013 | [1 comment on this post](#)

*As a first year teacher, a parent accused me of favoring girls over boys in my earth science course. In my defense, I explained I was working with boys and girls equally (50/50) and that perhaps this was the first time her son had experienced equity.*

STEM equity continues to elude educators. Often assessed in terms of undergraduate degrees awarded to women and traditionally underrepresented populations — STEM equity (outside the life, medical and social sciences) remains a source of concern and frustration for many.

Recently, I've had the opportunity to participate and work with local and national leaders to promote efforts that lead to STEM equity and diversity. Last month, the Colorado Community College System in collaboration with the NAPE introduced the STEM Equity Pipeline — an effort to use **collective impact** to ensure equity in state and local STEM education efforts. In this collaboration, NAPE will work closely with the states' Career and Technical Education community. The kickoff meeting and workshop identified the need for a) collecting data, b) identifying and selecting strong "champions" for equity in STEM, and c) creating a central database of STEM equity resources.

If NAPE's STEM Equity Pipeline represents a national effort, the work of the Latin American Center for Arts, Science and Education defines grass-roots change. Each week for a semester, CLACE runs after-school programs in STEM education at schools that cater to the education of traditionally underrepresented populations. CLACE runs two signature programs: Video and Green labs. Video Lab seeks to engage middle- and high-school students in investigations and storytelling around climate change. Students work with videographers and scientists to learn about and articulate their understanding of climate change through bilingual media products. Green Labs, designed for K-5, provides students the opportunity to study earth system sciences using simple, inquiry-based activities and art. CLACE selects facilitators for its after-school programs from within the local community, seeking individuals who model academic and professional success in their fields of expertise. By drawing upon leadership from within the community, CLACE provides students of traditionally underrepresented populations the opportunity to redefine their understanding of opportunity and success post-secondary school.

The NAPE/CCCS collaboration will address STEM equity issues within the formal education environment (schools) whereas CLACE takes aim at equity through informal education programming. According to post-doctoral researchers Lisa Hope Schwartz and Kathleen Hinko (University of Colorado, Boulder), informal education environments often succeed where formal environments do not because constraints on learning and teaching are different. Both post-docs work with and study the impact of informal education programs on student perceptions of STEM education and careers. They explained that informal environments included or even emphasized opportunities for youth to explore STEM concepts in open-ended ways not easily supported in schools where constraints include standards, testing, and deeply embedded stereotypes about student-teacher roles and relationships. In addition, according to Schwartz and Hinko, "identity development" comes to the fore in informal environments.

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Recall that NAPE research finds that one important barrier to STEM equity is “individual or internal.” In addition, **research** supports the value of exposing students to informal STEM education opportunities.

*Doug Haller is the principal of **Haller STEM Education Consulting**. Haller is an education consultant specializing in strategic planning and market analysis to drive design, development and sales of niche education products for clients in the for-profit, nonprofit, and education and public outreach fields. His creative approach is based on years of practical experience as an educator, instructional designer and education consultant. Check out his blog, **STEM Education: Inspire, Engage, Educate**.*

#### Acknowledgements

- 1 Marina La Grave, Latin American Center for Arts, Science, and Education
- 1 Kathleen Hinko, University of Colorado, Boulder
- 1 Jennifer Jirous, Colorado Community College System
- 1 Courtney Reed-Jenkins, National Alliance for Partnerships in Equity
- 1 Lisa Hope Schwartz, University of Colorado, Boulder

#### Sources

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*buthryan* says: **May 29, 2013 at 2:09 am**

Excellent post, Doug! It's high time people stopped equating STEM education with boys and started STEM equity. Thanks for writing this!

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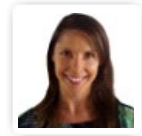
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