



October Theme of the Month Webinar Panel

Identity Development and STEM Learning

October 27th at 3:00pm EDT



Sasha Palmquist,
Moderator



Heidi Carlone



Nichole Pinkard



Zahra Hazari

<https://multiplex.videohall.com/pages/october2020webinar>



Webinar Chat

Nichole Pinkard : Link to panel note please

Kim Descoteaux : Thank you all for coming, we will be allowing people in at 2:55 EDT

Joni Falk : Hello all, We will wait till 3:03 to begin to allow everyone to log in.

M Hall : Hello every one! I co-lead the teen science cafe network and I am looking forward to this webinar.

P Marsteller : Hello everyone

K Welty : Good afternoon - I work at UMass Dartmouth with Prof Shakhnoza Kayumova.

K Woodward : Hi! I'm a K-5 Science TOSA in Santa Clara, CA

J Abel : Hello, I'm Jerian Abel, Co-Director of the Portland Metro STEM Partnership in Oregon.

P Marsteller : I am Pat Marsteller, Professor of Practice in Biology, emeritus

D McCreedy : Hi - I am VP of Audience & Community Engagement at Discovery Center - a children's museum in Murfreesboro TN - and the lead for the TN Girls Collaborative.

N Holmes : Hi there. I am a proposal development specialist at the University of Idaho.

A Allen : Alaine Allen, University of Pittsburgh and Co-PI for NSF INCLUDES STEM PUSH Network.

G Jayathirtha : Hi all, I'm Gayithri Jayathirtha, doctoral student, Univ. of Penn.

R Takeshita : Hi All- I'm a research scientist with a non-profit: the National Marine Mammal Foundation

A Stevenson : Hello. Anne Stevenson. I work at Univ. of Minnesota Extension Center for Youth Development with the 4-H program and STEM programming for youth K-12 as well as training adult volunteers and staff.

M Woodruff : Hi there! I'm Marissa Woodruff and I'm the Education Manager at The Works Museum, in Bloomington MN.

S Zochling : Good evening from Geneva, I am doing a PhD in physics education Research at CERN.

M Semmel : Hi, I'm a consultant working on leadership, strategic planning, and partnerships mostly in the museum/science center sector.

Joni Falk : Please feel free to introduce yourselves as we wait to begin

B Pike : Hello everyone. I am Bill Pike and I work with Arizona Mathematic, Engineering, Science, Achievement (AZ MESA) in Tucson, AZ

J Nanasi Davis : Aloha, I'm Jaymee from University of Hawaii Maui college

P Sabouri : Hi everyone, Pooneh Sabouri, Postdoc at FIU - joining from Miami Florida

D Mays : Good afternoon, colleagues. My name is David Mays. I am a civil engineering professor at the University of Colorado Denver, where I teach fluid mechanics and hydrology, study groundwater remediation, and co-lead a project called Environmental Stewardship of Indigenous Lands (<https://clas.ucdenver.edu/esil/>). Looking forward to this meeting!

A Suchow : I'm Ariella Suchow, a Learning Experience Designer with the Alliance for Decision Education

C Cooper : Hi - Caren Cooper at North Carolina State University, and coordinator of Citizen Science Campus program

K Todd : Hi from the Museum of Science, Boston!

L Rodriguez : Hello everyone! I'm Laura Rodriguez, assistant education professor at Eastern Connecticut State University

L Cook : Hi, I'm Liz Cook, Educator/Exhibit Developer at History Colorado Center in Denver,

S Rowe : Hi all. I am Susan Rowe and I work for the Office of Precollege Programs at Oregon State University.

R Mady : Hello I'm Rachael and I'm the Project Leader for Bird Cams Lab at the Cornell Lab of Ornithology.

L Cage : Hi all, I'm Lauren Cage, Gallery Programs Manager at The Tech Interactive in San Jose, CA

R Askew : Hello all - I am a postdoc at Vanderbilt University in Nashville, TN.

L Conner : Hello all, I'm Laura Conner, Associate Research Professor in Science Education at the University of Alaska Fairbanks

C Drummond : Hello, I'm an evolutionary biology/botany postdoc at Penn State

X Rozas : Xavier Rozas- EQUIPD Program Instructional Specialist

S Grover : Hello everyone, I'm Shuchi Grover, a researcher on K-12 CS/STEM learning, joining from Palo Alto, CA.

A Bastoni : Hi - I'm from CAST (www.cast.org) ... creators of Universal Design for Learning! So happy to be here!

M Shaw : Hi everyone, Mia Shaw. I'm a doctoral candidate at Univ of Pennsylvania in Philly

K Lucas : Hi everyone! I'm a PhD candidate in STEM education at UCSB

T Cheuk : Tina Cheuk, CalPoly-SLO

E Calleros : Hello! I'm a PhD student in mathematics education at San Diego State University and UC San Diego! I work with Bill Zahner!

S Martin : Hello everyone I am a Graduate student from University of Illinois Urbana Champaign

S Hsi : Hello. Sherry Hsi, Principal Scientist at BSCS Science Learning.

A Alred : Hello, I'm Ashley Alred, Education Program Leader at Cary Institute of Ecosystem Studies

J Iriti : Hi! I'm Jen Iriti, Co-PI of the STEM PUSH Network, an NSF Alliance

P Norris : HI Everyone, I am at Black Hills State University and the Sanford Underground Research Facility E&O Department. We do curriculum development, PD and lots of student presentations.

B Torres Olave : Hi all, I am a chilean PhD student at the uni of Bristol (UK)

D Hernandez : Hi everyone, Glad to be here. I'm Diley Hernandez, Senior research Scientist at Georgia Tech

G Raju : Hi Everyone, I am a graduate student at the University of Cincinnati intending to pursue doctorate in Engineering Education focusing at STEM Education.

G Ibarrola Recalde : Hello everyone, I am a postdoc in Engineering and Science Education at Stevens Institute of Technology

I Torres-Catanach : Hello everyone, I'm Irma and I'm a post-doctoral researcher at the University of Texas at El Paso.

A Mercier : Hi everyone! I'm at the University of Wyoming in elementary science ed

P Chick : Greetings I work on the ACRES project and do virtual coaching for Afterschool Educators in STEM

M Mayer : Greetings, Monika Mayer, independent consultant from Berkeley California

C Dornfeld Tissenbaum : Hello all, I'm an assistant professor Curriculum & Instruction at the University of Illinois, specializing in museum ed and teacher ed

J Chowning : Hi, I'm Jeanne Ting Chowning, Sr. Director of Science Education at Fred Hutch Cancer Research Center in Seattle and PI on several federal science education grants.

A Christensen : Hello, I am manager of a STEM REU Program at CIRES, CU Boulder.

T McDonald : Hi, I'm Tami McDonald. I'm a Program Specialist at the Smithsonian Science Education Center

M Garcia : Hi everyone. I'm Marisa Garcia, Senior Program Developer with National Girls Collaborative Project. I'm joining from Seattle

M Barnett : Hi, I'm Dr. Marlo Barnett from Chicago, Vice President of CSTA and CS4IL

A Master : Hi everyone, I'm an assistant professor in education at the University of Houston

J Schnakenberg : Hello. Jen Schnakenberg here, Assistant Director of Education with the Pittsburgh Parks Conservancy

S Stevenson : Hello!

J Zhou : Hi, I'm Jinzhi Zhou, a Ph.D. student at Indiana University

S Stevenson : Shauna Stevenson

K Miel : Hello everyone, I'm Karen Miel, PhD candidate in STEM Education at Tufts University

Kim Descoteaux : Please turn your video cameras off when the presentation starts. We will ask you to turn them back on during the breakouts

M Shultz : Hi, I'm Mollee Shultz, a postdoc from Texas State

J Crayne : Hello everyone! I'm Jenny Crayne representing the Oregon Museum of Science and Industry

J Langford : Hello all! I'm Janiene M. Langford with California State University East Bay's Institute for STEM Education. I serve as the MESA (Math, Engineering, Science Achievement) Director for the College Prep Program.

S Saleem : Hi I'm Shay Saleem, Manager of Teen Leadership Program, and Co-Founder of GOALS for Girls at the Intrepid Sea, Air & Space Museum in NYC

N Kress : Hi, Nancy Kress, doctoral candidate at CU Boulder in STEM education

S Stevenson : Hello!

K Reina : Hello! I'm Kelly Reina and I am the Girls Advisory Board Manager at the National Girls Collaborative Project.

R Hughes : Hello Everyone! I'm Roxanne Hughes at the National MagLab and Florida State University.

T Drape : Tiffany Drape, Virginia Tech

C Crockett : Hi Cynthia Crockett, Harvard University, also Div. Dir. for Research in Sci. Ed at NSTA

J Steinke : Hi everyone! I'm Jocelyn Steinke at the University of Connecticut.

L Lightner : Hello! I'm Lindsay Lightner, at Washington State University.

J Lorke : Hi everyone, I'm Julia Lorke, a research associate working for the German Citizen Science platform. I'm starting a fellowship to study the effects of citizen science participation on students' science identity next year.

I Loyacono - Kansas State University : Hi there! I'm Laura Loyacono, director of education and community engagement at Kansas State University. Loyacono@ksu.edu

D Taylor : Hi Donna Taylor from the STEM Education Center at WPI (Central MA)

M Rubin : Hi everyone! I am Michelle Rubin, a PhD student from the University of Ottawa's education department.

Kim Descoteaux : Please turn your video cameras off during the presentation. You will be asked to turn them back on during the breakout session.

B Litts : Hi friends! So great to be here. Thanks for organizing this panel.

B Stefany : Hi, from NH. I am the coordinator of STEM Literacy Community of Practice

M Iriarte : Hello! I'm Marilyn Iriarte, PhD student at the University of Maryland in the College of Information Studies

D Marsh : Hello all! I'm Dalton Marsh, asst. prof. of math at Cal State San Bernardino. I study math/science identity in the High School Longitudinal Study of 2009

M Ball : Hi everyone, I'm Mackenzie Ball from the School of Computing and Information at the University of Pittsburgh, also I am a part of the leadership team for the Broadening Equity in STEM Center (BE STEM Center) and the STEM PUSH Network.

Kim Descoteaux : Please turn your video cameras off during the presentation. You will be asked to turn them back on during the breakout session.

Joni Falk : Please post questions in the chat. The moderator will look at them and ask the panelists when there is a pause or at the end.

F Alade : Hi everyone! I'm Fashina Aladé, Assistant Professor in Communication Arts & Sciences at Michigan State University. My work focuses on the role that media plays in children's STEM learning and identity development.

G Jayathirtha : Is Nicole's video breaking up for anyone? or, is it just me?

S Martin : Same for me

K Woodward : yes

L Conner : Me too

E Tyree : Fashina- Go Green! I got my BS in Physics at MSU.

P Marsteller : breaking up

G Jayathirtha : thanks!

A Bastoni : it is for me too

S Zoehling : Question: It is difficult to translate science identity items (e.g. I see myself as a physics persons.) to other languages. Are there other people having the same problem? Any recommendations?

S Rowe : It is also important to avoid stereotypes about science and scientists

G Jayathirtha : fantastic point! shedding light on cultures and civilizations!

M Shaw : So glad this panel is highlighting how systems and cultures of power politicize our constructions of identity

S Rowe : One question: And how do these structures of power can perpetuate ones idea that they don't belong?

I Torres-Catanach : Could we have access to the slides?

C Ziker : That was very enlightening, Zahra! Many, many thanks!

C Delhaye : I am loving the panel's critical and refreshing perspectives.

M Rubin : Yes - can we get access to the panelist slides?

G Jayathirtha : thanks, Nicole!

Sasha Palmquist : Many questions from those who registered expressed an interest in better understanding equitable strategies to support STEM identity. Are there particular strategies that your work suggests are more or less effective to support STEM identity work?

S Saleem : @Nichole, great response and ideas--AGREED!

M Shaw : Yes joy!

D Marsh : love that point!

F Alade : Q for the panel or any knowledgeable folks in the chat: Do we have a sense of how early STEM identity develops? Is anyone looking at these concepts with early elementary or even preschool ages?

M Hecht : +1 @Mia!

P Marsteller : if the love and joy could continue thru ug and grad ed and our careers

L Torres-Gerald : ^^^ Yes, Patricia

S LoRe : YES Heidi!! Thank you for saying that! :) And thank you for the screenshot! Awesome!

S Rowe : Such a greta point. Particularly, STEM youth programs don't do a very good job of integrating equity and diversity, social identity in intentional ways pithing curriculum content.

S Rowe : Thanks Heidi!

L Torres-Gerald : Mani Garcia and I have been thinking about what it means to infuse joy in inclusive science communication.

S Rowe : Yes, agree, questioning and taking active steps to be in that uncomfortable spaces

D Hernandez : I completely agree!

S Saleem : Yes Heidi, especially in the classroom with teacher supports and recognition of the allowances of time to develop

M Shaw : So much of this reminds me of anti-racist and abolitionist work and perspectives we see in critical race theory.

A Jackson : ^^ agreed, Mia

P Marsteller : scientist spotlights?

W Bryant : As a 12-Jun teacher, should teachers have students do identity maps? If so, how should the identity maps be leveraged to build STEM identity?

D Marsh : Fashina, I think there are studies in early childhood that asked students to draw what they think a scientist looks like which may evidence early identity development

L Torres-Gerald : YES, a Science for the People!!!

Nichole Pinkard : we often don't have ways to understand all the ways youth participate in STEM-infused activities which leads to over focus on activities that we can track. As we build our own systems we now look at patterns of participation (i.e. logging in on Saturday, watch peers work, or the provided tutorials) to help us understand how you are engaging which helps us understand how our designed activities are being experiences.

S Rowe : Question: what strategies can we prove here to integrate more of the research work to the practice so that we start moving towards this interdisciplinary space for celebrating and understanding aspects of identity and STEM. Honestly, there is so much hesitation for us to put

ourselves in these uncomfortable spaces, although we expect learners to navigate these uncomfortable spaces

M Rubin : Dalton - are you talking about the “draw a scientist test?”

D Marsh : yes

P Marsteller : <https://scientistspotlights.org/>

S Saleem : Yes Zahra- great that you shared that history and narrative that often is never told

M Shaw : @lisette Yes! <https://freerads.org/> and <https://scienceforthepeople.org/>

M Garcia : @nichole, I love your descriptions of 'engagement' in STEM so important to broaden our views on that

L Torres-Gerald : @Mia - are you a member of either org?

Joni Falk : We will post on <https://Multiplex.Videohall.com> the recording of today's panel, as well as the Chat. We will also share slides that presenters choose to provide.

P Marsteller : <https://www.edutopia.org/article/50-years-children-drawing-scientists>

Joni Falk : Be sure to go to the site, and click on Theme of the Month to read the excellent blog by Carrie Tzou.

A Harper : Dr. Hazari what narratives do you draw from that counter the narratives of your students? In other words, what sources do you consider to be reputable when analyzing the narratives of your students? Do you draw from societal narratives, stereotypes, research articles, NGSS Frameworks, etc.?

Joni Falk : Also, please take the time to view the twelve posted 3 minute videos that address Identity Development and STEM Learning.

A Rao : Sense of belonging is so important to being able to show up and be your authentic, whole self

S Rowe : I take a step back to say some of us are ready to start this design work but are not empowered to do so in our work spaces

M Shaw : @lisette no not yet, but they share a lot of resources and have a great network of people. Them and SEEDS now that I'm remembering: <http://seedsweb.org/?fbclid=IwAR0jdW5-WtV10jHwwf3pcgAXJ04EaFNMWNf3gzzloZN6JxkQZK2yvhTh3DU>

P Sabouri : @Mia: YESSS Thanks for sharing SEEDs community

L Torres-Gerald : I am a member of Science for the People and SEEDs :)

L Torres-Gerald : Let me know if you have questions.

M Shaw : @lisette Thank you, will do! Nice to meet you :)

L Torres-Gerald : @Mia Nice to meet you, too!

N Holmes : I would love to see Nichole's Access and Visibility slide again, please

G Jayathirtha : +1 @Nancy

G Jayathirtha : but it will be in the video!

L Torres-Gerald : @Zahra - YES!!!

S Saleem : ^^

G Jayathirtha : @Zahra — wonder how you facilitate these tough conversations

S Rowe : Thank you Zahra

M Shaw : Yes! Students are eager to have these conversations. Thank you Dr. Hazari for acknowledging this

Jamie Bell : CAISE will link to everything that our Multiplex colleagues will make available in our summary blog on InformalScience.org as well

M Shaw : acknowledging* oops

S Saleem : YES- have an open conversation about it, what they understand about these structures and give knowledge/supports on how to move forward

R Mady : I'd love to hear if any panelists have experience or insight into how to help informal learners see that they have value in being co-creators in designing and implementing science

Heidi Carlone : See Zahra's STEP UP project: <https://engage.aps.org/stepup/home>

S Zochling : @Zahra, could you tell us a bit about your work concerning the influence of perceived recognition on science identity?

L Rodriguez : From Heidi's work, do you think it is important to be more explicit about students' authoring multiple identities (altruist) and specific STEM identities (conservationist) rather than focus on a general science or STEM identity? How does this work with/against boundary guarding?

G Jayathirtha : interesting! engaging with predictions can make room for such powerful conversations! thanks, Zahra!!

S Saleem : is it fear of administration, parents, communities that steer teachers from having these conversations?

M Shaw : I imagine there is a lot of reflective and positionality work for teachers to think about their own biases about STEM and their own STEM identities. But thankfully we can always "become" and "evolve"

D Marsh : I am finding that, when I have these conversations, my male preservice teachers and TAs, are much less likely to contribute to the conversation. Any suggestions?

Zahra Hazari : For sure...helping teachers see it themselves is challenging

G Jayathirtha : +1 @ Zahra — I can imagine!

Joni Falk : 3 minute Video on Digital Youth Divas is available in the playlist related to this month theme on the Multiplex. Watch it!!!

S Saleem : yes Nichole!

M Barnett : I like that Nicole

M Shaw : + 1 Shay

G Jayathirtha : “being comfortable with being uncomfortable” — can be so powerful! Thanks, Nicole

Zahra Hazari : Creating safe spaces for conversations...we often have discussion guidelines to help

L Torres-Gerald : @nichole - Yes, I try to teach my undergrads how to be comfortable with being uncomfortable.

Zahra Hazari : Yes!

S Saleem : Has work been done with parents/guardians of teens to support them?

Joni Falk : Also view Heidi Carlone’s video in the playlist on Broadening Identities for Diverse Groups Enaging with STEM

G Jayathirtha : @Zahra, discussion guidelines makes a lot of sense — maybe even establishing it as a classroom culture

Nichole Pinkard : @shay Ricarose work with parents has focused on helping families create inviting STEAM spaces in the home

S Rowe : Intersectionality is key!

S LoRe : Thank you for this great meeting! I have to pop back into the American Evaluation Association (AEA) virtual conference :)

S Saleem : @Nichole, awesome thank you!

A Vega : Also gender identity, yes

N Kress : This has been extremely informative, thank you. I’m sorry I have to leave early.

L Rodriguez : thank you Heidi - Yes I agree that all students identities need to be nurtured and promoted

W Bryant : thanks for the conversation

Nichole Pinkard : while I believe it was a gift to learn to be comfortable with being uncomfortable the challenge is to reduce that necessity

S Rowe : Thank you!

Y Kafai : Thank you!

Kim Descoteaux : Breakout questions: 1-From the perspectives and research that has been discussed so far today, what are some of the implications for the design and implementation of STEM learning activities and settings?

R Mady : I wish I could stay for the break out session, but I have to run. Thank you so much for a great discussion. Thank you panelists and organizers!

P Sabouri : Thank you - this has been amazing panel. Unfortunately I gotta jump into another meeting

M Benne : Thank you, all. This has been great.

L Avraamidou : Thank you so much Zahra, Heidi and Nichole!

M Hecht : Thank you panelists and great chat! I have to run too. Great insights!

S Grover : Thanks Panelists! Great discussion and insight!

S Grover : *insights

S Kayumova : Thank you Zahra, Heidi and Nicole!

J Chowning : I can't turn on my video because the host turned it off :)

A Suchow : Thank you!

L Cook, : Thanks all, I needed to log off for another meeting.

S Stevenson : Amazing Discussion!

C Delhaye : I agree! I definitely would love to participate in more discussions on this topic.

S Saleem : so wonderful, great conversation and inspiring panelists- would love to connect

S Bland - Albert Einstein Distinguished Educator Fellow : @Monika totally agree with the impact of including families

S Rowe : Yes!

G Jayathirtha : + imperialist !!

S Saleem : That was great Heidi- you nailed it

S Stevenson : ^^

S Rowe : Heidi thanks for saying that out loud!

A Allen : Thanks Heidi!

Kim Descoteaux : Don't forget to visit the Multiplex (<https://multiplex.videohall.com/>) to continue the conversation in the online discussion, and view the resources and the videos that go along with this theme!

S Kayumova : Thank you Heidi!

Heidi Carlone : Thank you, group 2!!!

M Garcia : thanks for the great summary, Zahra

S Rowe : No

A Suchow : Great question — not to this extent

G Jayathirtha : thank you for all the conversations!

M Barnett : its past time

C Delhaye : Thanks for summarizing this very complex discussion Zahra

F Alade : Thank you wonderful panelists and organizers!

Jamie Bell : THANK YOU Nichole, Heidi, Zahra, and our Multiplex colleagues- Joni, Kim, Kathryn- we can continue the discussion here- https://multiplex.videohall.com/month_themes/9/discuss

L Rodriguez : Thank you all, lots of food for thought!

M Mayer : Thanks for a wonderful session!

A Christensen : Thanks-FANTASTIC panel!

S Saleem : ^^

J Lorke : Thank you very much!

M Barnett : Thank you! this was great!

I Torres-Catanach : Thank you all! I have some more research to read ;)

A Christensen : Is it possible to get the panelists emails?

A Alred : Thank you all!

S Bland : Awesome discussion! Thank you

R Smith : Thank you panelists!

J Andrews : Agree, great discusion!