



## Chat Transcript Equity in STEM Education: The Connection to Culture Webinar on May 27, 2020

**Event Website:** <https://ngcproject.org/equity-in-stem-education-the-connection-to-culture>

Karen Peterson: Welcome everyone! Please introduce yourself here in the chat box.

Niki: Hi! This is Niki Becker with SciGirls.

Marisa Garcia: Hi. I'm Marisa here with NGCP. Located in Seattle

Patty: patty from nj

DeLeon Gray: Group Question: "What comes to mind when you think of equity in STEM?"

Cori Roton: Cori from Golden Valley, Minnesota

Joanne M Trombley: Joanne Trombley, Technology Engineering Educator, West Chester Area School District, PA

Jen Watson: Jen from Harrisburg, PA with Whitaker Center for Science and the Arts

William Fee: William Fee, Lead Instructor at the STEMLab at the State Library of Pennsylvania in Harrisburg, PA. Equity in STEM is ensuring that everyone can perform at the same level in STEM enterprises, including anything needed to bring them up to a baseline

Cori Roton: Noble Elementary School, Robbinsdale Area School, Computer Science Teacher Grades K-5

Melinda Higgins: Hi all--Melinda Higgins supporting Office of Nuclear Energy, Dept of Energy in DC

Olga Carcamo-Haney: Olga from CT. I am a bilingual science teacher

Jen Watson: Equal opportunities and access to STEM education

Joanne M Trombley: Equity in STEM makes me think that all people should feel comfortable learning in STEM fields, regardless of gender, race, ethnicity, socioeconomic background, etc.

Judith: Judith Schoenfelder, University of Idaho Program Specialist

Katherine Weber: Canadian Collaborative for Equity in STEM, from Kitchener, Ontario Canada

Natasha Vitale: Hi! Natasha here from CRC Robotics, in Montreal :) Equity in STEM is so important to me... as a woman in engineering, I think it is so important to girls to realize their potential and want to go into a STEM field because they have a passion for it, and not get discouraged because someone told them that they won't succeed because they are a girl. Equity in STEM is ensuring that everyone in STEM fields has equal tools and opportunities that will help them succeed in this domain.

Rita Karl: Rita Karl, Executive Producer of SciGirls! We are here in the Twin Cities. When I think about equity in STEM I think about stereotypes. Good question!

Melinda Higgins: Equity in STEM includes allowing all to have the same opportunities for access, learning, and growing in STEM.

Catherine West: Millcreek School District, Erie, PA

Kathy Thomas: Hi everyone! Kathy here from The Connector.

Jane Lee: Jane Lee Director of Education YouthPlaces (Pittsburgh, PA)

Lydia Katzel: Lydia from King County Library System in Washington state. Equity in STEM education means that everybody has access to STEM education no matter their location, socio-economics status - basically no holds barred to access

Jane Rice: Jane from the St. Croix River Association, I'm an environmental educator.

Casi Herrera: Casi Herrera from the National Girls Collaborative team.

Khadija Ally: Khadija Ally from Girls Inc. in Waterbury CT

Sara Fenton: Sara Fenton. Girls Inc. of the PNW

Linda Kekelis: Linda Kekelis with STEM Next Opportunity Fund calling in from Oakland CA. For me equity in STEM means that every child has true access to caring adults, supportive peer group and resources in and out of school that are fun, challenging and inspiring.

Patty: all are welcome= equity in stem

Ellie Marois: VP of K-12 Outreach for Society of Women Engineers Boston section

Rita Karl: We at SciGirls also think about ways to disrupt the norm around who can do STEM by showing girls and women working together on STEM projects.

Colleen Lehane: Hi. It's Colleen. Manhattan Youth Afterschool Teaching Asst., NYC

Cori Roton: Access for all...

Jennifer Stetler: Jennifer Stetler, STEAM Teacher DeKalb County Atlanta, GA .....equity in regards of access to computers and internet in this virtual learning age

Ariana Ehuon: Ariana, just finished my master's in teaching and now trying to get a job in NC. Equity to me means that all students have access to what they need to achieve in STEM, regardless of what specific, individual resources they each need to have the same access.

Jane Lee: Equity in STEM means that educators needs to be culturally relevant and access for all regardless of situation. Equity does not mean equality

Colleen Lehane: Bridging the digital divide

Jennifer Stancil: Jennifer Stancil joining from North Carolina. Proud advisor to SciGirls and Board Chair for NGCP. Can't wait to hear today's webinar!

Rita Karl: We have a guide called SciGirls Strategies which helps educators learn about the research behind instructional strategies to engage girls in STEM.

Tanya Fernandez: Hi, everyone! I'm Tanya from Girls Inc. of Greater Houston! I think equity in STEM is meeting students where they are and giving them the attention and resources necessary to get them to a point where they are comfortable

Timothy Fowler: Timothy Fowler, NY STEAM Girls Collaborative. Equity in STEAM to me means everyone gets to participate in STEAM learning; meaning no one is told it isn't for them, or left out of opportunities because of <reasons>. Young people get the support and level of challenge that allows them to learn and grow while generating personal meaning and identity.

Dale McCreedy: Dale McCreedy from Discovery Center at Murfree Spring, Middle TN State Univ., and TN Girls Collaborative. Equity to me means finding ways for all to reach their fullest potential.

Jerica: Jerica Temple - Camp Fire National Headquarters - Kansas City, MO

Rita Karl: Addressing barriers such as lack of role models, lack of access to STEM opportunities, building awareness of parents and girls of the wide variety of STEM careers.

Jacqueline Genovesi: Jacqueline Genovesi, Philadelphia PA The Academy of Natural Sciences. In the current situation how we can continue to ensure work on equity remains a priority

Jessica Neely: Hello, Jessica Neely YWCA Greater Pittsburgh, STEM Specialist. Wanting to work towards see women and women of color more involved in the work of STEM

Lauren Borer: Lauren Borer. Mohonk Preserve in the Hudson Valley, NY. Equity means everyone can participate to their fullest potential and have personal connections to the materials and topics.

Katherine Weber 2: What equity in STEM means to me is equal access for all. This includes gender identification and ethnicity

Karla Barraza - Oregon MESA: Hi! My name is Karla Barraza. I'm the Event and Volunteer Coordinator at Oregon MESA, a non-profit organization that reaches out to under-represented students in STEM in Portland and Salem. Thinking about equity in STEM, I think of missed potential, and a lack of inclusive environments.

Arlene Nededog: Arlene Nededog, Director of Inclusion at Colorado State University, in the College of Natural Sciences. I also am the site coordinator for the Colorado/Wyoming Alliance for Minority Participation working with all the STEM colleges at the university.

Joanne M Trombley: Although is "SciGirls" I hope that you address the issue in STEM for the LBGQT community. I have 20+ female born students who identify in non-traditional female ways who are very much interested in STEM and they feel left out/not included. And I have three born male who feel female but want to go into a STEM field. Is this project helping these students?

Jennie Mathur: Jennie Mathur, Girls Inc.

Jennifer Stancil: Equity has taken on a larger meaning to me...beyond gender. It has to do with access, advocacy, race, neurodiversity and more. I think intersectionality is a fascinating way to explore STEM identity.

Nicki Sirianni: Hi! Nicki Sirianni from WGBH in Boston MA!

Amy Hiet: Amy Hiet Girls Inc. of Washington County Hagerstown MD

Manny Leon: Manny Leon, Arizona Mathematics, Engineering, Science, Achievement (MESA)

DaNel Hogan: Director of The STEMAZing Project in Tucson, AZ @TheSTEMAZingPro

Laahiri Chalasani: Hello! Laahiri Chalasani from the Children's Science Center in Virginia and a SciGirls Trainer

Karla Barraza - Oregon MESA: Hi Manny! I'm from Oregon MESA

Adrienne Provenzano: I'm an informal educator focused on STEAM and Arts Integration. A NASA Solar System Ambassador in Indiana.

Wendy DuBow: Wendy DuBow, Director of Evaluation at National Center for Women & IT

Paula Garcia Todd: Hi! I'm an AAAS IF/THEN ambassador - chemical engineer with 17 year career in pharmaceuticals

Katie - Iowa: Katie Nedwick - youth librarian at Cedar Falls Public Library in Cedar Falls, IA

Raheela Rehman: Hi Its Raheela, I am a teacher assistant to a Middle School kids. I work through a organization call Manhattan Youth.

Kathy Thomas: NGCP Website: <https://ngcproject.org>

Marisa Garcia: [www.theconnectory.org](http://www.theconnectory.org)

Marisa Garcia: [www.fabfems.org](http://www.fabfems.org)

Stephanie Rayome - St. Louis Public Library: Stephanie Rayome, Youth Services Provider in St. Louis, MO

Diana Oliveros: Diana Oliveros, Consul for Community Outreach at The Consulate of Mexico in Seattle. We are building a network of STEM stakeholders interested in improving STEM opportunities for Mexican and Latinx individuals.

Rita Karl: Joanne - SciGirls specifically welcome girls of all experiences, regardless of gender identity, gender expression or sex assigned at birth.

Manny Leon: Equity in STEM means shifting teaching and outreach to support students ability to access STEM through a variety of pathways.

Meghan Curry: Meghan Curry - Director of Insights El Paso Science Center in El Paso, TX

Rita Karl: SciGirls will shortly be releasing our first trans role model video, I hope it will be helpful.

Ali Jackson: Ali Jackson, NISE Net, Scienceter, Ithaca NY

Keli Christopher: Is this event primarily about gender equity?

Jennifer Stancil: congrats on the emmy nod!

Kathy Thomas: Congrats on Emmy nomination!

Lauren Borer: Rita, I just started in February!

Khadija Ally: congrats! thats awesome

Marisa Garcia: <https://pbskids.org/scigirls/>

Marisa Garcia: <http://www.scigirlsconnect.org>

Marta Larson: Michigan After-School Partnership, MI Collaborative Lead

Rita Karl: [http://www.scigirlsconnect.org/resource\\_topic/role-model-profiles/](http://www.scigirlsconnect.org/resource_topic/role-model-profiles/)

Marisa Garcia: SciGirls Strategies: <http://www.scigirlsconnect.org/scigirls-strategies-engage-girls-stem/>

Karen Peterson: Keli - the information on this webinar applies to all.

Keli Christopher: Culturally responsive strategies are available where?

Rita Karl: SciGirls Strategies: <http://www.scigirlsconnect.org/scigirls-strategies-engage-girls-stem/>

Rita Karl: They are outlined in the introductory section around CRT.

Cheri Burch: Curriculum Coordinator for AAUW Tech Trek NM

Katherine Weber 2: Yes, it is amazing how culture can impact how student relate to what we are teaching. This includes content as well as strategies.

Adrienne Provenzano: via images and quotes used in presentations

Karla Barraza - Oregon MESA: Cultural diversity is the main focus in my programs. We work really hard for our students to see their cultures represented.

Keli Christopher: The student body is more diverse than the staff diversity.

Cori Roton: Role models that are used in instruction

William Fee: As a library we actively work for diversity and inclusion. In the STEMLab we try to work with the children where they are

Rita Karl: We filmed one season in Spanish and engaged girls and mentors from nine different cultural heritages.

Joanne M Trombley: Having posters with assorted looking people; not all white! Also include differently abled physically people working in STEM. I also include technological issues from all over the world. Different cultures have many of the same issues, but the culture can lead to different solutions but there are many solutions to a given problem! I want my students to understand that!

Keli Christopher: I find that it takes years to develop trusting relationships, especially if you are not of the same culture/race as your students.

Jennifer Stetler: How do define culture for those like myself with a mixtures of various ethnicities? Then, how to implement it into your teaching?

Sumi Shaddock: Thank you for those resources!

Rita Karl: I spent five years working in the Middle East and it changed my teaching practices forever.

Alicia Santiago: [santiago554@gmail.com](mailto:santiago554@gmail.com)

Carol Davis: Culture can help students identify with an idea or concept which helps them to feel confident about STEM learning.

Marisa Garcia: <http://weareisolar.org/>

Jennifer Stancil :Go NC State Wolfpack! Love to connect with you are your team, DeLeon. I love what you're doing in the Triangle.

Keli Christopher: I'm a NC A&T Engineering graduate!

DeLeon Gray: Thanks Jennifer!

DeLeon Gray: Wolfpack in the house!

Juan: Wakanda forever.

Jennifer Stancil: That's awesome, keli! I just talked to the first woman PhD in Computer Science at A&T. Just did an interview with her for girls involved in computer science.

Joanne M Trombley: Rita Carl, how did that experience specifically change your teaching practices?

Keli Christopher: I'm the first black Ph.D. in Agricultural Engineering from the University of Illinois.

DaNel Hogan: We LOVE the NC State version of the engineering design process found here: <https://www.engr.ncsu.edu/theengineeringplace/educators/>

DeLeon Gray: Kudos, Keli!

Jennifer Stancil: Keli, that's amazing. If you don't know [www.siobahncday.com](http://www.siobahncday.com), let me know.

Paula Garcia Todd: I just did a panel discussion with Siobahn! And will do another one iwth her on Friday, she's phenomenal! :-)

Paula Garcia Todd: Keli, you rock, such an inspiration!!! :-)

Keli Christopher: You can check out my nonprofit at [www.stemgreenhouse.org](http://www.stemgreenhouse.org)

Rita Karl: Joanne - As an American and a New Yorker, I learned to listen, listen, listen. There was a divide between Muslim and Christian educators, so we designed a year long program that brought different schools (and cultures) together over time. This opportunity built relationships. I served as a teacher educator (bringing technology and student-centered learning to Egyptian students).

Rita Karl: Relationship building and learning about other's cultures over time taught me that it is a lifelong process.

Joanne M Trombley: Thank you!

Joanne M Trombley: Yes, relationships matter most!

Rita Karl: Over time seeing teachers from different cultures start to support each other was great.

Jennifer Stancil: Keli - This is just awesome! Let me know if you ever need anything! I hope you're a big part of the connectory for NGCP as well.

Cori Roton: Relationships are key!

Briana Green: <https://www.youtube.com/watch?v=FhiJRjxgzvA&t=18s> Video of iScholar students presenting their school design in California

Briana Green: <https://www.dropbox.com/sh/17q3gbocey0atyx/AABo7ix6gCX9uLcA0vPMOygJa?dl=0> Video of iScholar teachers and students reflecting on the process leading up to students winning 1st place

Keli Christopher: Yes. It does take longer to develop relationships than most people realize and STEM programs are often too short to develop these relationships.

Katherine Weber 2: This model has similarities to the Developmental Asset model/framework

Rita Karl: I love this diagram - related to but different from the iceberg model.

Lindsey Carmichael: As a side note for Joanna - these iScholar students could be great candidates for the SXSWedu Creative Design Competition: <https://www.sxswedu.com/competitions/learn-by-design>

Joanne M Trombley: This root graphic is outstanding for getting the concept across; thank you!

Adrienne Provenzano: Another source of a variety of design challenges is NASA. The office of STEM engagement has details.

Dale McCreedy: I agree Rita - a great diagram that positions these behaviors in really valuable and actionable ways.

Katherine Weber 2: <https://www.youtherie.com/the-assets>

Joanna Ali: Thank you Lindsey!

Joanne M Trombley: For the Engineering Design Process for all ages and many activities, go to [iteea.org](http://iteea.org)

Karla Barraza - Oregon MESA: Does communalism differ from human centered design?

Katherine Weber 2: Karla - great question!

Katherine Weber 2: How is communalism different from human centered design?

Jennifer Stancil: love to hear answer to karla's question. In addition, that design is beautiful!

Jane Rice: These students are so talented, I'm very impressed.

Jenniffer Stetler: what are the specific pedagogical strategies?

Laura: This was so inspiring!

Laura: Yes please!

Emily: Will a recording of this webinar be made available?

Briana Green: Visit us at: [weareisolar.org](http://weareisolar.org)

Shelly Hope: yes! another webinar!

Adrienne Provenzano: Has there been thoughts on developing programming connected with Covid-19>

Christina Hernandez: can you share the title of the article/paper you wrote again? I'd love to read it!

Marisa Garcia: we will share the slides along with all other resources

Briana Green: Gray, D. L., McElveen, T. L., Green, B. P., & Bryant, L. H. (2020). Engaging Black and Latinx students through communal learning opportunities: A relevance intervention for middle schoolers in STEM elective classrooms. *Contemporary Educational Psychology*, 60, 101833.

Briana Green: <https://www.sciencedirect.com/science/article/pii/S0361476X19304382>

Manny Leon: Yes! Great response. Thank you!

Karla Barraza - Oregon MESA: Gotchaa, thank you for your wonderful answer!

Christina Hernandez: thank you!

Carmen Stanton: Thank you!

Marisa Garcia: What are some specific actions that you will take to make your program or your teaching/facilitating practices more culturally responsive?

Marisa Garcia: What ideas for communal learning could you see being implemented into STEM activities?

Rita Karl: Thank you Karen - that was terrific!

Katherine Weber 2: I love when you use the response windows. It is a great strategy to learn from everyone and glean even more ideas from the webinar.

Karen Peterson: Yes! Thanks for the feedback.

Karen Peterson: We really like it too.

Colleen Lehane: Yes. That was so helpful.

Rita Karl: SciGirls has a few episodes that address these topics, e.g. social justice, citizen science, and more.

Adrienne Provenzano: Work with arts specialists and teaching artists when designing and implementing STEM programs! Great way to leverage learning.

Rita Karl: Very important Adrienne!

Rita Karl: Thank you Alicia!

William Fee: Icebreaker can be deadly to shy and introverted kids- they shut down and it's hard to get them to participate again

Karla Barraza - Oregon MESA: Yay

Rita Karl: Thank you to the whole IScholar Team!

Jen Watson: Thank you!

Adrienne Provenzano: Great to learn from everyone! Thank you presenters and participants!

Colleen Lehane: Thank you!

Mary McMahon-Chappell: Thank you.

DeLeon Gray: Thank you!

DeLeon Gray: We hope to remain in touch!

Rita Karl: Great point William.

Raheela Rehman: will we get a certificate

DeLeon Gray: [www.weareischolar.org](http://www.weareischolar.org)

Alicia Santiago: Thank youuu! Gracias!

Joanne M Trombley: Thank you!

Juan: Mil gracias, todos. Wishing everyone well.

Marisa Garcia: Subscribe to NGCP monthly e-newsletter: <http://ow.ly/Zuds30qwpOK>