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Generating Engagement and New Initiatives for All Latinos

GENIAL

Generando Entusiasmo y Nuevas Iniciativas para Audiencias Latinas

Summit Proceedings Report
June 5–6, 2017

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PROCEEDINGS

This report summarizes the Generating Engagement and New Initiatives for All Latinos (GENIAL) Summit, which was held on June 5–6, 2017, at the Exploratorium in San Francisco, California. With generous support from the National Science Foundation, 91 participants, a mix of practitioners, community leaders, media specialists, government officials, policy professionals, and researchers from across the United States and Puerto Rico attended the Summit.

GENIAL Principal Investigator Isabel Hawkins of the Exploratorium launched the Summit by welcoming participants. She introduced her co-PI Verónica García-Luis, and the Exploratorium's GENIAL team. She explained that the Summit's name, GENIAL, means "awesome" in Spanish. It also implies possibility, something good, something that will take us into the future to engage Latino audiences with open doors and authenticity and with great participation by families and everyone we cherish in the Latino community.

GENIAL Summit Goals

- Identify needs and opportunities for Latinos in informal science learning (ISL) environments
- Facilitate and strengthen professional relationships
- Identify recommendations, emerging research questions, and actionable insights with an outlook toward the future
- Contribute to a more informed ISL field

Hawkins thanked NSF for its support of the program, and introduced Bob Russell, a program director in NSF's Division of Research on Learning in Formal and Informal Settings. She described him as "a true colleague and partner, and a humanitarian, helping to make sure Latinos succeed." Russell congratulated the Exploratorium on this summit, and reiterated the critical importance of engaging Latinos in informal science learning and in the workforce. He reflected on a similar conference in Albuquerque in 2009, which about 10 GENIAL participants attended, and encouraged participants to apply for NSF funding to build on these conversations (click here and here for summaries of the previous conference).



Maya elder María O. Ávila Vera offered an invocation in her native language, Yucatec Mayan. Hawkins translated the remarks into English. Doña Maria thanked her ancestors, and her wise grandmother who taught her many things. She invoked the winds and the seeds of beans, squash, and corn, which are always planted together by traditional Maya farmers. She gave thanks for life and for everything that Mother Earth gives us.

Chris Flink, Executive Director of the Exploratorium, welcomed the participants. As a relatively new director, he said "There is no group I've been more excited to welcome than this one." He thanked NSF and Bob Russell, and encouraged all participants to bring their best thinking to the timely and important issues at hand. He expressed excitement about the potential for this Summit to make a catalytic difference. His concluding words of encouragement were, "The conditions today feel just right. The stage is set, the words have been said, it's time for you to do important work. Welcome."

MAXIMIZING AUDIENCE PARTICIPATION

The Exploratorium GENIAL team and advisors designed the Summit to maximize participant interaction and input, and to identify a concrete set of next steps for the field.

LOW- AND HIGH-TECH FEEDBACK

Throughout the Summit, participants had options for providing ongoing feedback:

- They wrote and drew on "talk back boards" in the auditorium.
- They shared highlights, questions, and provocative insights at #GENIALsteam on social media such as Twitter and Facebook.



BREAKOUT SESSIONS AND CONSENSUS-BUILDING PROCESS

The Summit included three breakout sessions for reflection on the panel discussions (see the agenda). Before the first breakout session, participants were assigned to one of three breakout groups of about 30 participants each, and they stayed with the same group for each breakout session throughout the Summit. The GENIAL team selected the groups to reflect the range of participants' organizations and roles.

Each breakout room had four tables, for a total of twelve small group discussions during each breakout session. Throughout the Summit, all participants discussed the same three questions during the breakout sessions:

1. What emerged during the panel discussion that was new to you?
2. How did the panel content shift, or not shift, your thinking about your work?
3. What needs to be done next (recommendations, actionable insights, emerging research questions)?

The consensus-building process to identify a priority set of action items was as follows:

- Each table compiled its responses to question 3, posted them in the room, and presented them to the room.
- Participants used dots to vote on their top three priorities.
- GENIAL team members and advisors tallied the votes, and compiled the room's top priorities into a single list.

When the groups reconvened after each breakout session, a representative from each breakout room presented the top priorities from their room to the entire Summit. These presentations identified areas of overlap and different ideas across the three breakout groups.

LATINO AUDIENCES: A COUNTERNARRATIVE

STRAND LEADERS

Cecilia Garibay, Garibay Group

Verónica García-Luis, Exploratorium

PANEL PARTICIPANTS

Cecilia Garibay, Principal, Garibay Group

José González, Executive Director, Latino Outdoors

Patricia Lannes, Museum Consultant



THE BIG IDEA: Understanding the Nuanced Diversity of Latino Audiences and Their Fluid Identities/ Intersectionality in the Context of Broadening Participation in STEAM

Verónica García-Luis introduced the session on Latino audiences, and Cecilia Garibay moderated a discussion with Patricia Lannes and José González.

IDENTITY AND CULTURE

There is a need to shift from binary perspectives to understanding culture as fluid and dynamic.



From "either/or" to "and." Mainstream culture thinks about Latinos in a binary way. Everything is either this or that, which creates "othering." You're either Latino or American. Simplifying can make life easier, but humans can't think of themselves as one thing or the other. González prefers the term "ambicultural"[1] to bicultural because it has an additive aspect. "It's like ambidextrous—you're able to use both."

Lannes pointed out that museums sometimes forget about this complexity and fluidity of identity when they think about Latino audiences. As an example, Garibay added that museums treat people as either English or Spanish speakers, but most audiences operate in the "and" space. She explained, "The fluidity of language and moving in and out of both languages is a fluidity of culture. It moves us away from the binary." González agreed that "you're taught that you can't have both. It's either Spanish or English. But what about Spanish *and* English?"

As another example, González shared his name as he was introduced (José González) and then shared his full name (José Guadalupe Adonis González Rosales). He makes conscious decisions about when to use his full name and when to simplify it. "We're not going to have a cultural discussion at the DMV. I just need my license."

Defining yourself and being defined by others. Lannes didn't know she was Latina until she came to the United States and had to check a box on a form. Her experiences raised the questions of "How do you present yourself? Who is defining you?"

The panelists discussed code-switching,[2] and learning to navigate each situation "depending on where the wind is coming from," but at the same time learning to assert yourself. González said, "Your identity exists in a quantum flux of states. You're all of it until it collapses with that interaction. I'm José, Mexican by birth, American by citizenship, Latino by cultural identity, Chicano by sociopolitical identity, and Hispanic by

1 The term *ambicultural* is defined as the ability to functionally transit between Latino cultures and the American, giving them a unique position in the consumer landscape. Hispanic culture in the United States is long lasting and sustainable.

2 The term *code-switching* was originally used by linguists to refer to the practice of switching between two different languages in a conversation. Its use has been expanded to refer to the ways in which people—particularly people from nondominant groups—express different aspects of their languages, identities, and cultures in different social situations.

census count. All of those are true, but which José does the DMV get versus which José do you get versus which José does my grandmother get?"

A key takeaway was that Latinos are diverse individuals, not an audience. The goal for museums or science centers should be to understand who is in front of them.

AMPLIFICATION

Simplification vs. amplification. Simplification of culture is reductive. Amplification steps outside the assumptions and acknowledges that culture and identity are assets to authentically build relationships, experiences, and knowledge.

Language. Language is an asset to build on, rather than a problem to be solved. People use their own language to negotiate situations and reach deeper levels of understanding. Museum staffs need to recognize that visitors need their own language as a foundation to build on, rather than expecting the visitor to change.

Simplification can happen when you're trying to understand someone from your point of view, as opposed to amplifying the experience that is being co-created. In museums, the goal is not to simplify the content, but to amplify. Some ideas can be better explained and communicated in a different language, because words are laden with a set of experiences. Using a single word in a different language might make the whole concept clearer.



"Not the tamales in my face." If someone is planning a Latino event and asks González if they should have tamales, he asks if that is for them to decide. For him, "If you are providing a space for the community to bring experiences, feedback, and food and they choose tamales, great. But if you make the decision for

them, it raises questions about Hispandering[3] and Columbusing.[4]" He said that corporate America is good at code-switching and putting more subtle cultural markers in their advertising, "not the tamales in my face."

Lannes added that a culture as rich as the Latino one can't be grouped—for example, Cinco de Mayo does not share the same importance for Uruguayans as Mexicans. It's about respect and understanding the complexity of culture and identity. She said, "When we simplify, we dishonor. People feel alienated and it doesn't work."

Garibay clarified that the point is not that cultural markers are unimportant, but rather understanding what those markers are in relation to the communities museums work with. If people want a formula or a checklist for engaging Latino audiences, her message is that "there is not a checklist. It's about what you are creating together at that moment. It's about understanding ourselves individually, understanding our own cultural competence."

DECOLONIZING

Co-created rather than appropriated.



González framed the issue as, "[If] I am operating from a place of privilege, how do I open that space so that more richness can come in?" He emphasized the importance of knowing the place of privilege and power, which can be tricky. His work with barrio-based organizations in Tucson and Los Angeles is about decolonizing: Latinos being present in our own space, and taking Chicano culture back from gangs.

Garibay stressed the importance of respecting the way individuals and communities self-identify. Hispanic, Chicano, Latino, Latinx: all are valid, and all have meaning. She reminded the audience of how important it is to think about "our own language, the way we talk about the reasons for engaging communities with STEM, and what that means."

3 Pandering to Latinos or Hispanics.

4 Columbusing refers to situations when a white person claims to have "discovered" something that already existed, as Columbus did with the Americas. It usually entails taking credit for something that may be part of someone's culture and already in existence.



The panelists discussed sovereignty as being about understanding, respect, and valuing other ways of knowing. They raised questions about sovereignty such as:

- How does a museum or other institution open and share its resources?
- How do you find your voice and are you given space in an organization to find your voice?
- How do we come together to talk about something interesting to a science organization?
- How do I become part of the community rather than just serving the community?

RISK-TAKING

Willingness to experiment and move outside of established practices to authentically collaborate and innovate with others. It's about moving outside your comfort zone and making space for a joint creative process

Risk-taking is important and necessary to move the needle, make room for authentic engagement and creativity, and create space for investigation and discovery. The panelists shared the view that, "If you don't take risks, you don't innovate." Operating from established practices or places of comfort doesn't leave room for the learning and change that can come only with discomfort.

The panelists also acknowledged the difficulty of taking risks. Risk-taking requires reading who is with you and who is not with you, and it requires trust to share ideas and move forward as a team into potentially unknown territory. It also requires accepting the possibility of failure. The reward, however, lies in the discovery and magic of diving into something when you don't know where it will go. To avoid unnecessary frustration, Lannes suggested finding ways to share challenges and risks that have not worked.



Q&A WITH THE AUDIENCE

AUDIENCE QUESTION: *What are we going to do to make people feel comfortable? How do we make people feel welcome without the tamales? Some people don't speak one language or the other. The public is more receptive to Spanglish*[5] *than the leadership of my institution.*

PANELIST RESPONSES:

González: *Spanglish is code-switching, it's amplification. It doesn't mean that the conversation is lower—it's richer.*

Lannes: *It's important to build the trust. Once you build the trust, you can have a transparent conversation. Relationships take a long time. That's when it becomes authentic.*

AUDIENCE QUESTION: *How does a big cultural institution become part of the community, a place where Latino families choose to visit when they have leisure time?*

PANELIST RESPONSES:

Garibay: *Look to the GENIAL website for resources, and ask fellow GENIAL participants what has worked and not worked for them. Don't be afraid to start small.*

5 Spanglish is a hybrid language combining words and idioms from both Spanish and English, especially Spanish speech that uses many English words and expressions.

Garibay and González: *Remember that this work is a long-term commitment, especially in big organizations, where the shifts need to happen at many levels. You can have a transactional moment where you open the doors for free, but it takes a lot longer to build a relationship with the community.*

Lannes: *Find key people in the community to connect with. If you are staying too long at your desk, you are not making those connections.*

Garibay and González: *In terms of how people use their leisure time, it's not just about how much the museum costs, it's about how much the museum is worth to them. Ask yourselves how much value your institution has in the community.*

Isabel Hawkins concluded the session on Latino audiences by reminding participants that, "We bring the entirety of our cultural identity into everything we do."

MARKETING, COMMUNICATIONS, AND MEDIA

STRAND LEADERS

Lorraine Yglesias, Monterey Bay Aquarium

Julie Nunn, Exploratorium

PANEL PARTICIPANTS

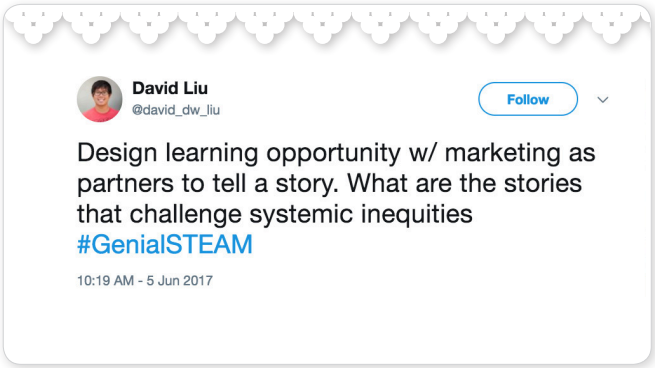
Carolina Echeverría, Development Director, Innovate Public Schools

Jesús Chávez, Senior VP of Operations, mitú Inc.

Lorraine Yglesias, Director, Marketing Programs, Monterey Bay Aquarium

THE BIG IDEA: The Role of Marketing Communications in Connecting Latino Audiences with STEAM in Informal Learning Environments

With Julie Nunn moderating, Carolina Echeverría, Jesús Chávez, and Lorraine Yglesias discussed the role and value of marketing.



EMBRACING THE VALUE OF MARKETING AND COMMUNICATIONS IN INFORMAL LEARNING ENVIRONMENTS

Marketing is an every department job. Marketing is about identifying shared experiences and storytelling. It involves taking whatever assets and stories exist in your organization and bringing them to market. Yglesias told the audience, "If you have a specific group of people with marketing attached to their names, they are your strategic partners…. Before you start thinking about a [program] concept, bring marketing to the table. We can be your strategic partner."

Chávez doesn't think about "Mar/Comm." Instead, he concentrates on building a relationship and communicating with an audience. mitú, Inc., targets American youth from a Latino point of view. As Chávez explained, "We don't build Latino content. We build content with a Latino perspective. It's the *Little Mermaid* strategy—we want to go where the people are." Although mitú has a specific marketing team, the entire organization is built around digital communications and using social strategies to communicate with different audiences. All of their activities are about understanding what will engage an audience.

Engaging with the community and building trust. Echeverría pointed out that the typical approach is to develop a program or product, and use marketing to check with the audience after the fact. She said that

with this approach, the audience "only tells us whether you like what we created or not. It's a product that's already been developed for you, you have no input into changing the product." You're inviting the audience to a party that was already planned, and they were not part of the planning. However, marketing can be used to bring the audience into the conversation as you develop the experience, to connect the consumer to the process. This way, Echeverría explained, "It's not just invite me to the table, but let me talk and change things." This approach can help build relationships from the beginning. So, "you start bringing me to the dance, you are willing to dance with me, we start dancing, we start getting to know each other, and then we can dance differently and create amazing things that were not at the table before." Yglesias agreed that it would be wise for organizations to shift their thinking to the idea that the market determines the relevance of your organization.



Discussing the importance of trust, Chávez said he tells brands that they must earn the right to sell to the mitú audience by building trust with them, instead of trying to sell to them right away. One way to build trust is to engage people where they are rather than trying to bring them to you—such as by having your organization become part of the community. As an example, Echeverría explained that the Exploratorium has a weekly science segment on Univision. The segment talks about everyday science, rather than advertising a program. Because of this segment, the Exploartorium is known to the Univision audience.

STEPPING INTO THE SHOES OF YOUR AUDIENCE: THE POWER OF DATA

Using data helps you understand what your audience wants to do, how they think, what they like, and what they don't like. For informal science learning organizations, audience research about affinity and interest in STEM helps organizations understand the nuances of a segmented audience.

Echeverría said that, "Numbers are amazing and give a sense of how things look." Reflecting on the discussions in the first panel, she advised participants to bring in people with different perspectives to help make sense of the data. "That's a form of risk-taking." She also cautioned that, "Numbers are strong, but don't forget to talk to people. Not a bunch of questions, have a conversation." Nunn agreed that stories are a way to find out what people are thinking. She said that every kind of data—from Survey Monkey to talking with people as they were leaving the Exploratorium—was "my friend in terms of both internal and external marketing challenges." She advised participants to "get scrappy about how you collect your data," meaning be determined, resourceful, and find opportunities wherever they exist.

200%: 100% Latino and 100% American

mitú, Inc., published an empirical study that describes a new scale for measuring multigroup ethnic and American identity in the United States. A study using that scale showed that Latinos were the only group that scored high on both the American index and the multicultural index. These data support mitú's characterization of its audience as 200%: 100% Latino and 100% American.

The company uses these and other data to better communicate with its audience and understand how its content engages different ethnic groups. As an example, the majority of mitú's content is in English. Their research showed that using one Spanish word increases engagement, but using more than one Spanish word lowers engagement. Chávez explained that a single word is a cultural cue that the content is relevant, but more than one word signals that the content is not in the audience's first language.

RECOGNIZING RESOURCES INSIDE AND OUTSIDE THE ORGANIZATION

The panelists shared some practices at their institutions related to marketing and communications.

Storytelling. At the Monterey Bay Aquarium, representatives from nearly every department come together once a week to share their stories. The practice originally started as a way to feed the "social media beast," and has continued as a way for the departments to remain connected to the larger story of the Aquarium.

Making data useable for the organization. The Marketing and Communications department at Innovate Public Schools digests the data they collect to make it accessible for others in the organization. They then use the data to bring together different teams within the organization to "have the conversations and understand the different perspectives."

- **Using social media to engage rather than promote.** For mitú, Inc., social media have evolved from a promotional tool to being part of the fabric of engaging with the audience. Social media are a part of the overall content plan for everything they do, and promotion has become secondary. Echeverría agreed that social media are a useful way to start a conversation with the audience.



Q&A WITH THE AUDIENCE

AUDIENCE QUESTION: *We heard a lot about social media. What about traditional media?*

PANELIST RESPONSES:

Echeverría: *A message in traditional media can be just as powerful. It depends on the value that medium has in the lives of the audience. Univision has a huge brand and is strongly connected with its audience. When you communicate through a brand that has a connection with the audience, you get the value of that brand.*

Yglesias: *I have been retraining my brain to think about all forms of media, versus traditional and nontraditional. It's just media now. There are three types of media:*

- *Paid (radio, TV, print, paid social)*
- *Earned (public relations)*
- *Owned (your social networks, Twitter, newsletter, website)*

Yglesias: *Radio is very powerful. Local DJs have relationships with their audiences. Embedding your message in their show is more powerful than placing a 30-second advertising spot. Embedding the message into something the audience trusts is more important than the form of media.*

Chávez: *All media serve a purpose. It starts with whom you want to engage with and where they are consuming their content. That drives where and how you engage with them.*

Nunn: *I constantly ask myself what I want people to do and ask how I start them on the journey that I hope they take. Thinking about it as a journey and putting the best medium in place at different points along that journey.*

AUDIENCE QUESTION FOR CHÁVEZ: *I would love to see Abuelita Cubana visiting science museums. mitú has great characters and my kids and their friends know those characters.*



RESPONSE: *As a brand, we have an effort around public affairs. You have to be in relevant conversations. We started last year around the elections. We had an immigration forum earlier this year. We had a small forum on diversity. We're trying to push the narrative of multiculturalism. A lot of youth are engaging with our brand. It's our responsibility to make sure that we don't just do it for the fun of it, but for social value, too.*

AUDIENCE QUESTION: *What are some specific ways in which small organizations can partner with organizations like mitú or Univision to empower Latinx communities with STEAM? We have the science expertise but you have the Mar/Com expertise.*

PANELIST RESPONSES:

Chávez: *Start with a baseline and make this part of your organization. Marketing needs to be integrated into every aspect of the organization. You don't necessarily need a dedicated marketing team.*

Chávez: *It doesn't have to be expensive. If you don't have resources, then you have to be scrappy. For example, bring in youth from the community, and help them get some experience.*

Yglesias: *Reach out to the public affairs divisions of your media partners. Media organizations are happy to help when there is intent and authenticity.*

WHAT GENIAL PARTICIPANTS SAID ABOUT LATINO AUDIENCES AND MARKETING, COMMUNICATION, AND MEDIA

Participants adjourned to breakout rooms to reflect on the first two panel discussions. As described elsewhere in this report, during the breakout sessions they discussed these questions:

1. What emerged during the panel discussion that was new to you?
2. How did the panel content shift, or not shift, your thinking about your work?
3. What needs to be done next (recommendations, actionable insights, emerging research questions)?

This section presents some common themes and takeaways from the discussions of questions 1 and 2. A synthesis of question 3 appears in the section What Needs to be Done Next?

RELATIONSHIP BUILDING AND CO-CREATION WITH THE COMMUNITY

A major takeaway from the panel discussions was the idea of co-creating informal science learning experiences with the audience. This entails:

- Needing to involve community in programming.
- Starting a conversation with the community: [We have] no answers yet, [but we're] trying to figure it out together (co-create).
- Being part of the community, versus serving the community, versus telling the community what to do or "lecturing" to them.
- Understanding the community is an important part of co-creation.
- Look at your community to understand their culture and values.
- Know the audience you're trying to engage.
- Relationships are necessary to be responsive.
- Assumptions and generalities cause difficulties.
- [Develop] content through a Latino point of view.
- Storytelling is powerful.
- Media are powerful in Latino communities, and a strong way to build relationships.

Respect and humility are key to building the necessary trust.

- [Trying to figure out] how to bring authenticity and trust to your own work and the larger museum community.
- [The] Latino community is rich, all bring something to the table.
- [Make an effort to] know what you don't know.
- Cultural humility [as opposed to cultural] competence [is important], especially given the diversity of the Latino community.

Co-creation and engaging Latino audiences in a meaningful way takes time and commitment.

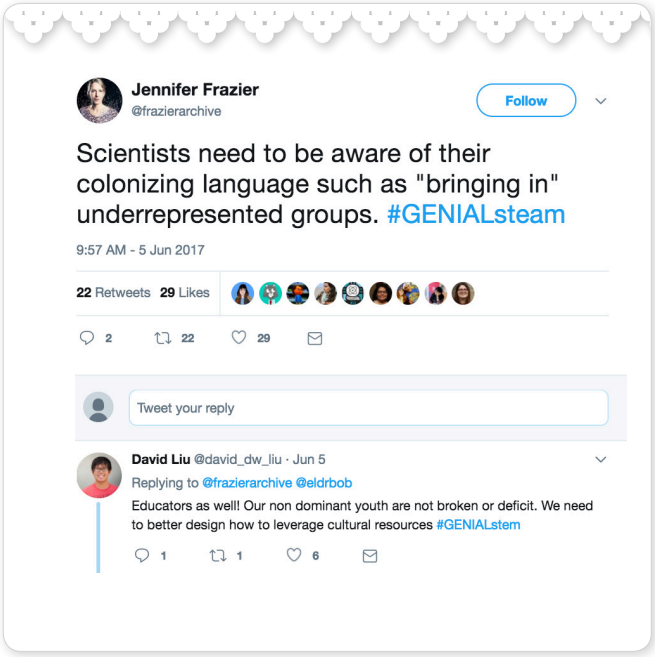
- It takes time to build trust.
- Be intentional in engaging with Latino communities and empower the visitor.
- The whole museum must know the intent to provide a good experience.
- This work might not look like our other accomplishments. It can't be seen as taking time away from our "real work."

IDENTITY

Participants were reminded of the nuances of identity and the ways that identity comes forward when engaging in informal science learning experiences.

- "Both/and" instead of "either/or."
- "I didn't know I was a Latina until I came to the United States."

LANGUAGE



For many, the panels introduced new language for what Latinos experience, or presented familiar words in a new context.

- Columbusing
- Hispandering
- Amplification versus simplification
- Ambicultural
- Binary
- Latinx on a T-shirt versus in an academic context
- Code-switching

The panels also got participants thinking about language use in museums.

- Language in informal science learning environments carries many assumptions.
- Language choices directly affect the audience.
- Be careful of language that devalues Latino audiences: "to simplify is to dishonor."
  - Rethinking dual language labeling: Why not Spanglish?
  - Personal re-examination of my bias against Spanglish.



MARKETING AND COMMUNICATIONS

Several ideas in the marketing and communication discussion were new.

- Everyone is an agent of marketing.
- Bring the marketing team to the table early, not "Here it is, go market it."
- Marketing is bringing up the audience voice and getting feedback.
- Earn the right to sell by building relationships.
- [Figure out] how to use and collect data. What are good and bad data?
- Use marketing and social media to open a dialogue with the community, not just to advertise something.
- 200%: 100% Latino and 100% American.

RISK-TAKING AND ACKNOWLEDGING FAILURE

The panels left many participants feeling empowered and inspired to take more risks.

- It's okay to fail.
- Think about this as an iterative process.
- Get outside your comfort zone in terms of thinking about what is most engaging to the audience.

COMMUNITY COLLABORATION AND EMPOWERMENT

STRAND LEADERS

Salvador Acevedo, Scansion

Paul Dusenbery, Space Science Institute

PANEL PARTICIPANTS

Antonia O. Franco, Executive Director, of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)

Santiago Ruiz, Executive Director, Mission Neighborhood Centers, Inc.

Maddie Correa Zeigler, Education/Outreach Consultant

THE BIG IDEA: Designing Programming *with* as Opposed to *for* Latino Communities (Engagement vs. Outreach)

Paul Dusenberry framed the discussion about how institutions can rethink the ways they work with communities, what collaboration really means, and what it looks like. Institutions working within their communities will achieve the greatest change. A useful metaphor for such collaborations is a STEM learning ecosystem that articulates the function and impact of various educational components that extend beyond the formal education system. These components include early childhood education and afterschool programs, as well as informal education organizations such as science museums and public libraries. In the context of a learning ecosystem, collective impact is a strategy to harness the power of collaborative efforts to solve complex and often intractable social challenges.[6] In terms of STEM informal science learning experiences, these concepts can be used to help identify the conditions that must be present for healthy and sustainable collaborations (e.g., a shared vision, shared assessment system, shared activities, open communication, and organizational support).

PANEL PRESENTATIONS

Salvador Acevedo then introduced the panelists. Each panelist began with a brief presentation related to their work in community collaboration and empowerment. Key ideas from the presentations are presented here.

Antonia Franco, SACNAS

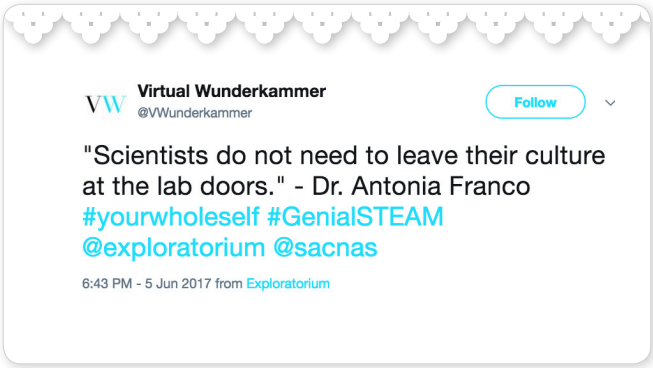
Changing the face of science. The STEM workforce is 70% white, 16% Asian, 6% Latino, 5% African American, 1% multiracial, 0.4% Native American and Pacific Islander.

SACNAS was born when scientists of color didn't see faces that look like them. After over 40 years, SACNAS' work is equally relevant today. It unabashedly focuses on two populations: Latinos, who are the fastest growing, and Native Americans, who are the most underserved and underrepresented in every statistic you see.

6 For more information, visit https://ssir.org/articles/entry/collective_impact.



Science, culture, and community are fully integrated into everything SACNAS does. Culture is an asset: It's OK to show your culture. You are a great scientist when you bring your whole self to your work. You don't leave your culture at the lab door.



Supporting co-creation and co-development. You have to include the people you want to impact from the very beginning, throughout the entire process. Programs have to be genuine, authentic, and culturally responsive to the community that you're working with. You have to demonstrate cultural competence. If you believe in something, you have to demonstrate that in your programming. For example, Franco said that at SACNAS "We have diverse staff and we integrate our membership in everything we do."

At every educational stage, we need to see role models. That is encouraging and validating. SACNAS can be that resource.

Constant communication is important. Everyone has talked about it, but actually doing it is the hard work. Integrating that voice and perspective throughout the process is difficult.

Focusing on science and *la familia*. SACNAS is making sure that science is integral to the program and has integrity. As scientists, we need to do a better job of increasing public understanding of science, why it's important, and how it impacts our society. There are many scientists who can help bridge and help our families understand what science is early in a child's life.

At the SACNAS conference every year, there are 4,000 people of color in one room, and all scientists. It's a life-changing experience. Undergraduate students present their research, and there is a program for their families to come and understand what their children do every day. It's never too late, and it's always an opportunity to bring families in at any stage of education. Continue to integrate *la familia*.

Santiago Ruiz, Mission Neighborhood Centers

Although Ruiz' nonprofit community-based organization provides services from the cradle to the rocking chair, his particular emphasis is on early care. He began with some "facts to remember":

- The brain's capacity is 90% developed by the time a child reaches age 5.
- 52% of the population in California and within the California public education system is Latino.
- Most learning institutions such as the Exploratorium allow free entry for children ages 0–3.



He then presented data from an assessment of kindergarten readiness for the incoming 2015 kindergarten class in San Francisco Unified School District. Nearly 900 students were assessed, with oversampling of the Latino and African American populations to ensure adequate representation. Key findings included:

- Latino and African American students had the largest increases in preschool participation from 2007–2015.
- Kindergarten readiness increases when families engage in activities such as reading, singing, or playing games with the children. Engagement in these activities varied by family income level. For example, families earning at least $32,000 per year read together and told stories or sang songs with their children significantly more frequently than families earning under $32,000.

Attending museums once a month was not enough to affect school readiness. Given the level of access needed to improve school readiness, Ruiz suggested that museums might consider extending free admission to age 5, rather than age 3.

Maddie Correa Ziegler, Education/Outreach Consultant

Based on her work co-creating programs with Latino audiences at the New Mexico Natural History Museum, Ziegler posed four interrelated questions about program development for GENIAL participants to consider.

- **How do we develop environments that draw on participants' cultural practices?** This question is important to consider in light of the fact that we know participants bring prior knowledge. Useful discussion around this basic question might include brainstorming how to learn about cultural norms and practices that participants bring to the learning environment.
- **How do we integrate the interests and concerns of the community in developing and implementing informal learning environments?** How do you include the knowledge base of the audience?
- **As we engage Latinos as informal learners, how do we co-create content that is personally meaningful?**
- **How do we ensure that social structures important to the intended audience are reflected in program design?** Program developers need to know what social structures and protocols are important to participants—how will we learn that?

PANEL DISCUSSION QUESTIONS

After their introductory remarks, the panelists discussed two questions.

QUESTION 1: *What are the guiding principles for co-creating/designing programming with a community?*

Ziegler began with three principles:

Actively seek and include the knowledge base of the intended audience from planning throughout all phases of the initiative. This process may include exploring nontraditional partnerships with organizations that are familiar to the audience, wherever that may lead you. Example: A program for Latino audiences in Denver partnered with the Catholic Church to provide programming after the noon mass to engage individuals from the parish in STEM activities. The church was not their initial partner, but the partnership enabled the program to reach its goals.

Identify connectors who are respected in their communities to serve as cultural brokers, seeking their input throughout the process. Example: A Chicago street artist who was well loved in the community became an effective gateway to reach the community.

Build trust with the intended audience, which takes time. Ziegler added that synthesizing these three principles into one "requires the involvement of members of the audience as active, active, active participants in every part of the process."

Franco offered two additional principles:

Understand the community. It takes a long time to build trust and engagement with the Latino community, and strategies for building that trust might be unconventional. Example: The annual SACNAS conference is not a "feel good. It's an intervention. Our [group] meal [for conference participants] is an important part of it."

Recognize power dynamics. If we're not aware of how power dynamics work in our own organizations, we won't understand it in other organizations. If the organization is not diverse, are you relying on one staff member? That's a lot of pressure; the responsibility for diversity initiatives should rest with everyone, not just the Latino staff. It is important for leaders and collaborators to understand that there is a power dynamic, and provide resources that empower staff to take ownership and support them to be successful.

You have to have honest conversations when partnering with other organizations [that have served predominantly white communities]. You have to tell them that they haven't treated our communities well, but



how do we work together? It takes long-term commitment and being thoughtful, open, and honest about the challenges. Ruiz concluded with a final guiding principle:

Respect. However you engage in this process, make sure it's done with respect. Long-term impact depends on the leadership and governance of the institution. If those are sound, the partnership feels more comfortable. If not, how long will it last? Is this a community engagement process because a funding source is driving it, or is it a true community engagement process? The return on investment will be much more significant if it is a true engagement process done with respect than if you were treating this as just another project.

Example: Many institutions come to the community as they seek to secure support for a specific program, idea, or initiative. At some point the head of the organization should make her or his presence known, to show the institution's commitment.



QUESTION 2: *Our Latinx communities, specifically low-income, underserved ones, have always gone through challenging times (political, economic, discrimination, etc.) and have found a way to endure those circumstances and thrive. What are the values and beliefs that we should consider when working with these communities so they can continue to thrive?*

Acevedo started the discussion by acknowledging "the elephant in the room—the political times. Latino and Native American and other minority communities have gone through periods of discrimination, terrible times in general. We always came out in a way stronger. How can we empower our communities to bring the resilience that we need these days?"

Showing respect. Consistent with a common theme of the GENIAL Summit, Ziegler suggested asking the community what is important to them and using that understanding to move forward in ways that make sense and that show respect.

"Persistence is in our DNA." Franco noted that "as a community, we embrace the word *communidad*. As a family, we value what someone in the family brings. We understand the concept of a network very well. Continuing to say that we're a community of support and empowering each other is important. The reality is that politics are cyclical. Continuing to give inspiration and tell our stories is important. Showing people who look like us is really important." SACNAS was the first diversity organization to partner with the March for Science. SACNAS members wore T-shirts with their community's slogan—"Persistence is in our DNA."

Partnerships. Ruiz also emphasized the importance of community and partnerships. He said, "When we see someone succeed in the Latino community we usually say, 'Good for them.' Those on the other side ask how we can help with access to opportunities. Those who have the ability to open the door can take that family to a different level." Ruiz said, "I look at all of us, I say how are we all connected and committed to addressing the achievement gap? That's the future of our *familias*, our state, and our nation." He shared an example of a partnership between his organization and the Exploratorium to offer STEM training for early care providers. Because his budget is limited, his organization relies on these kinds of partnerships to provide quality early-learning experiences. As he explained, "We're creative. We can't do it on our own. We can do a better job if we partner with other institutions like the Exploratorium."

Q&A WITH THE AUDIENCE

AUDIENCE QUESTION: *I work as an outreach director for a national lab. It was my task to bring wonderful programming to the community. It was not a sustainable effort that was endorsed by the team. It was just part of the grant. The community is eager, wanting, ready, but the scientists are the ones who are stopping us. The power dynamic was not walking the talk. I continue to see this in a systematic way. I am frustrated with this power issue. What is it? Is it lack of diversity training? What really is the job description for being an outreach specialist to the Latino community?*

FOLLOW-UP QUESTION FROM AUDIENCE: *What is the role that funders can play in that accountability? We self-evaluate and paint a pretty picture of how we do this work, but we don't talk honestly about how we can improve.*

RESPONSE FROM GENIAL PARTICIPANT AND FORMER NSF PROGRAM OFFICER ANDRES HENRIQUEZ: *The broadening participation part of NSF grants has created almost no impact at all. NSF is trying to redefine what broadening participation means, but it takes a larger community effort to make sure that it gets implemented in the way it's intended.*

RESPONSE FROM GENIAL PARTICIPANT AND NSF PROGRAM DIRECTOR BOB RUSSELL: *I'd like to see more Latinos, Native Americans, and African Americans being PIs so they are in the driver's seat. There are opportunities at NSF. [He encouraged participants to apply for jobs at NSF as well as funding for a workshop or small conference (up to $50,000) or for a planning grant called Exploratory Pathways (up to $300,000)].*

Responses from current and previous panelists:

- We can share a lot of ideas. Here and outside, many people are doing amazing efforts. Connect the dots, have a marketing initiative to make this known to the community.
- It goes back to intentionality: Whenever you do something, can you identify a connection point to something else, and what is that connection pointing to?
- This is the third time Bob [Russell] has told us where we can get money. It's about knowing that these opportunities exist.



WHAT GENIAL PARTICIPANTS SAID ABOUT COMMUNITY COLLABORATION AND EMPOWERMENT

Participants adjourned to breakout rooms to reflect on the panel discussion of community collaboration and empowerment. As described elsewhere in this report, during the breakout sessions they discussed the following questions:

1. What emerged during the panel discussion that was new to you?
2. How did the panel content shift, or not shift, your thinking about your work?
3. What needs to be done next (recommendations, actionable insights, emerging research questions)?

This section presents some common themes and takeaways from the discussions of questions 1 and 2. A synthesis of question 3 appears in the section What Needs to be Done Next?

RESPECT

The panel prompted much discussion about respecting, understanding, and valuing the audience.

- Reinforce the fact that Latinos value respect, *comunidad,* education, and family.
- Concept of respect is not new, but what does it look like in practice?
- Trust in telling me what you're interested in, not what I think you're interested in.
- Authentic care really matters in creating bonds.
- Perceptions of some organizations as untrustworthy [was new or surprising].
- Creating a sense of value to the participant is important to attract an audience.
- Relationships take time, and leadership needs to know that.



Some participants began thinking about their own work differently as a result of the panel:

- Thinking about unconventional partnerships between museums and churches, the media, community organizations, etc., shows understanding of community.
- Realizing that our organization doesn't do enough to go out in the community. Lots come to us, but how do we go to them?
- How do we engage the community to understand the importance of STEM?

DIVERSITY

For many, the panel was a reminder that much weight is placed on the one or two diverse staff members in a given organization.

- Diversity initiatives are a responsibility of all in the institution.
- Start defying the convention that the one or two Spanish speakers have to do everything related to diversity—translate, speak for the community, etc. It is not sustainable.
- Systems need to be in place to acknowledge the time, resources, and skills needed to do translation and engagement the right way.

These discussions also sparked ideas about hiring and promotion practices to encourage and support diversity.

- Some diversity is relegated to "lower," nonprogram, nonauthority jobs.
- [There is a need] to shift organizational culture rather than just hiring diverse staff as add-ons.
- Foster and promote those with enthusiasm, experience, and skills outside of traditional norms and cultures.
- Value what diverse staff members bring, versus checking a diversity box.

INSTITUTIONAL CAPACITY BUILDING

More generally, participants discussed the capacity building that is required for co-creation with and engaging Latino audiences.

- Creating capacity is more than just grant-based work.
- Empowering staff.
- How do I continue as a manager to not hold all the power, influence, and information? How do we change or set representation at the top?
- Develop staff capacity and leadership skills.
- What does the job description look like? Especially when written by white staff working in a nondiverse region, struggling to recruit diverse people?
- Connect with SACNAS.
- Explore micro-internships. [7]
- [Adapt p]rograms such as the National Association of Latino Arts and Cultures fellowship.

LEADERSHIP

Participants also reflected on the importance of strong, committed leadership and the current lack of Latino leadership. We need:

- Courage and perseverance in leadership
- Leadership with a commitment to community
- A reminder of the need for leadership and governance board commitment.
- [To address the l]ack of Latino leadership in cultural institutions, including board members.
- [To address the l]ack of diversity of leadership and in the informal science education field itself.
- Visioning and figuring out distributed leadership to be intentional from the beginning.

EARLY CHILDHOOD AND FAMILY ENGAGEMENT

The data on the school readiness gap in the Latino community prompted discussions about engaging parents and families in early learning.

- Reinforced the importance of family engagement.
- How to better engage parents? They all care and want the best, but they have to make a living.
- Techbridge Girls held focus groups with parents that might be useful for thinking about how to help them, how to help their daughters.
- Think about having a STEM focus in prenatal classes, or something like an exhibit about how babies see.

7 One participant described microinternships as programs that range from half-day job shadowing to two-week internships. Because they are not as long or time-intensive as traditional internships, they offer more options and flexibility for the organization offering the internship and for the interns.

PROGRAM SUSTAINABILITY

For many, the panel discussion raised the issue of how to continue outreach and engagement efforts.

- Not new, but raises the question of how to continue these efforts long term.
- The trauma or challenges of losing funding for a program.
- How do we not leave communities lacking after the program ends? Communities need tools to continue after the program ends.
- The strategies discussed can be lost in the time it takes to build trust and respect (three-year process). We don't have as much time as we think.
- Outreach in the community takes time that programs don't always allow. Funder versus need: Do they match up? PIs need to understand what is left behind after funding is gone.

KNOWLEDGE SHARING



Participants expressed a strong desire to continue these conversations, learn from each other, and provide inspiring examples without criticizing institutions that are not as far along.

- How do we even out practices across institutions?
- How do you get the field to a level where there is a common foundation to push boundaries?
- How do we learn from each other?

ORGANIZATIONAL CHANGE

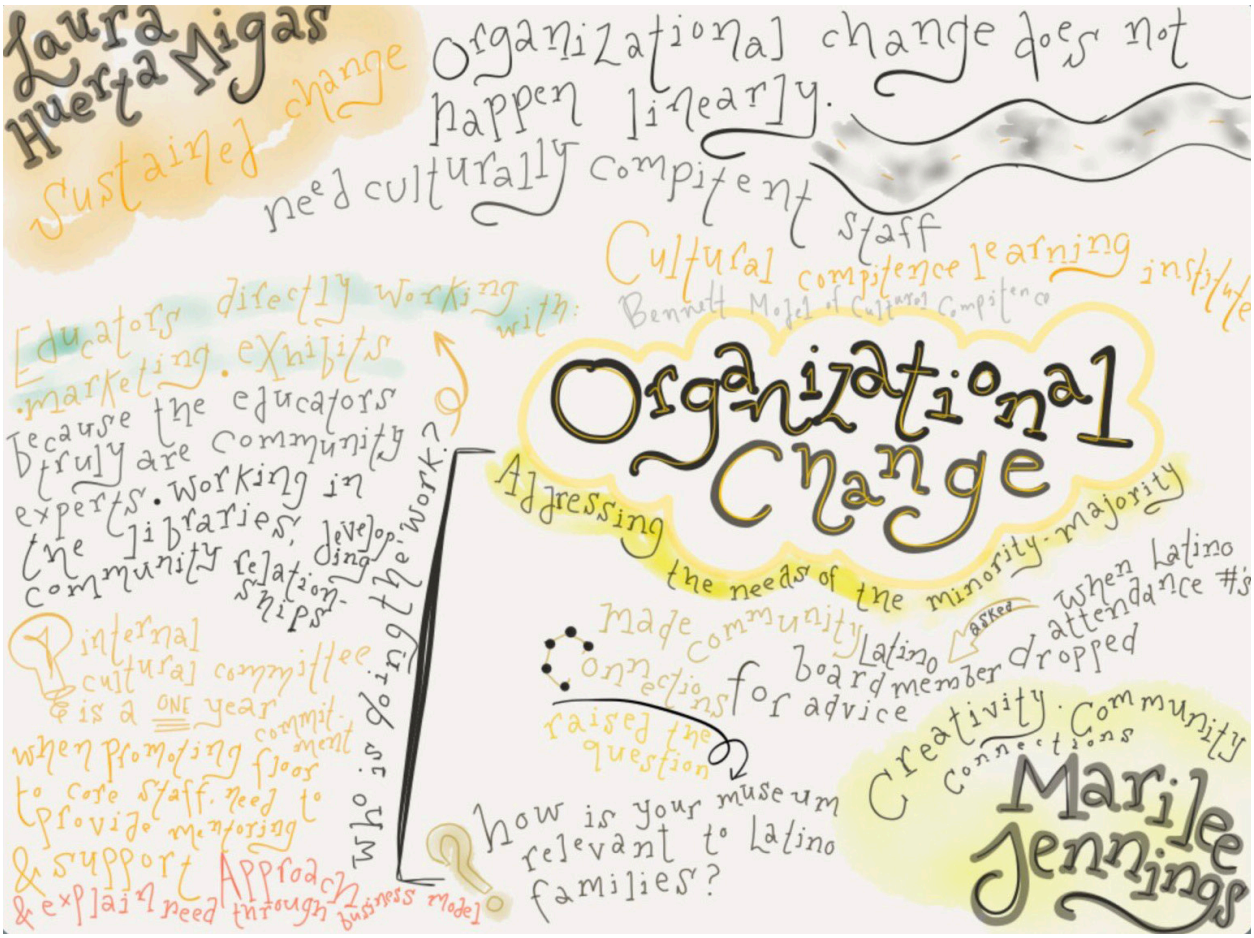
STRAND LEADER

Laura Huerta Migus, Executive Director, Association of Children's Museums

PANEL PARTICIPANT

Marilee Jennings, Executive Director, Children's Discovery Museum of San Jose

BIG IDEA: How Does a Mainstream Organization Create Inclusive Organizational Sytems?



Participant word cloud by Claudia Pineda.

INTERVIEW

Laura Huerta Migus conducted a one-on-one interview with Marilee Jennings, CEO of the Children's Discovery Museum in San Jose, California. As Migus explained, Jennings was the logical choice for this session because, "Children's Discovery Museum has made an organizational commitment to engaging Latinos and diverse audiences in its community. It has achieved the level of commitment and success that we all aspire to."

The edited interview is presented here.

Children's Discovery Museum: Fast Facts

Opened to the public: 1990

Annual budget: $9 million

Staff: 120 staff, including 65 full-time equivalent staff

Audience: More than 400,000 children and families in 2017

Laura Huerta Migus (LHM): *The Children's Discovery Museum's work in audience development has been well documented. Tell us about when and how those projects got started.*

Marilee Jennings (MJ)*: San Jose has been majority minority [city] for over 50 years. LADI (Latino Audience Development Initiative) and VADI (Vietnamese Audience Development Initiative) came about because the largest minority populations in San Jose are families from Mexico and Vietnam. That's where we put our energy.*

LADI started organically. Museum attendance begins to decline after about three-and-a-half years. We looked at what was going on. Tuesdays through Fridays, school field trips reflected the diversity of our community, and that went away on weekends. The Latino audience was noticeably missing. I reached out to key people in the community. A Latino board member introduced me to others. We ended up with a group of people who said it's not a marketing problem. They told us to look inward and see how our museum is relevant to Latino families. That's how it started.

LHM: *At least one goal was probably to fix your attendance problem. Were there other goals?*

MJ: *The museum's mission is to serve all children. When [we saw] big gaps, we felt like we weren't delivering on the promise we had made to San Jose. We had a mission gap and a margin gap. We had an agreement to serve the community and were not honoring it well enough. The financial gap was that a big part of our community was not attending. We had a mission/margin dilemma.*

LHM: *Many museums probably would have undertaken an outreach effort. But you have the framework of an audience development initiative.*

MJ: *We realized that the Latino community isn't a single community. When we started to get to know the community, the diversity was remarkable. A single program wasn't going to be enough. We asked how each of the five major components of our museum (exhibits, educational programs, events, communications, and governance/operations) has its own goals in serving the Latino community. We developed an institution-wide approach.*



LHM: *Tell us about the official time span of LADI.*

MJ: *We started in 1994. It took 12–18 months to convince everyone that this was the right thing to do for the museum. I armed myself with data. The census became my best friend. I was not the Executive Director then—I was a marketing person. I needed to make a very strong business case to the Board of Directors. I had started to work closely with Spanish-language media. Their marketing was extraordinary. They delivered packages with so much data about the community that they helped me make the case. It cost twice as much to buy a spot on Spanish language radio than [on] English [radio]. All of the big consumer businesses were doing their advertising there, so I had the makings of a business case that said, "Let's put our money where the money is." Aligning the mission and margin allowed me to propel the initiative forward.*

We rolled out in 1996. Our big anchor was a puppet show that was traveling to only three cities in the United States from Papalote, the Children's Museum in Mexico City. These beloved puppets in Mexico were going to be retired and never travel again. We worked with Papalote to bring them to Children's Discovery Museum as a new exhibit. Even though it wasn't an interactive exhibit, it was a way for us to ground the initiative in something very big and something the community was used to us doing: a new exhibit. That's how we got our start.

This hasn't ended. This is a lifelong journey. The Latino community continues to be more and more diverse. There is a constant need to refresh what you're doing, the communities that are serving as your advisors. Those are all just as important today as they were in 1994.

LHM: *What's critical and different with LADI is that the approach was constructed and the puppet exhibit was an opportunity, as opposed to the exhibit being the mechanism to solve your problem. It's worth noting as a good example. For LADI, you did receive funding?*

MJ: *Yes. We had excellent results from our work with LADI. When [we] decided to begin a deep relationship with the Vietnamese community in San Jose, we received IMLS [Institute of Museum and Library Sciences] funding to advance that work. We felt we had discovered a system—this five-part system where each part of the museum was involved. We felt like we could handle anything San Jose tosses our way. When we learned that San Jose had the largest Vietnamese community outside Vietnam, we asked if that was reflected in our daily audience, and the answer was no. So we took our five-part system and off we went.*

Eighteen months into the project, well, we hadn't made any difference. The five-part system [that we used for LADI] didn't work. It was a reminder that the Vietnamese community was more internally diverse than the Latino community. The Latino community was more united because it had its own media. The [approaches] we used to get into the Latino community weren't available. We had to rethink our approach. We still used the five-part system, but each one had a more organic approach to VADI.



LHM: *What did you and your staff learn about the museum through these efforts?*

MJ: *Early on we recognized that our mission and our themes of community, creativity, and connection were a remarkable platform to do this audience work. We design and build our own exhibits, and that gave us an opportunity to turn on a dime. We put Latin music in exhibits that had sound components. We were able to take on strategies that included the entire museum because we were young and nimble. We have trilingual signage in English, Spanish, and Vietnamese.*

We have a full-time Vietnamese and a full-time Latino Coordinator. They are part of the education and programs department, and they report to the Director of Education. They have big jobs because they are both internal and external facing. They do a lot of Spanish and Vietnamese language outreach at libraries because that is how we give the communities a sense of what interactive learning is about. Internally they are part of all teams that come

together: marketing teams that plan events, exhibit groups to make sure their perspective is represented. They are very much an internal force as a representation of their ethnic community.

LHM: *There are interesting ways in which you have embraced co-creation. Can you share? You have supported some growth outside of your mission.*

MJ: *As the political landscape changed, our museum was working hard to figure out how to take a stand appropriately. Every day I was getting calls about participating in certain events: supporting Planned Parenthood, the March for Science, etc. Out of the blue I got a call—if adults are naturalized, their children automatically become citizens. But if the children are 14–18 years old, they are asked to take an oath. It is hard to find a place for those ceremonies. I got asked if the Children's Discovery Museum would host those. Of course! This is a great way to make a statement about who we are, what we care about, and what we believe in. We hosted a citizenship ceremony five days after the first travel ban. The media poured out. Children's Discovery Museum found a pathway into the conversation that makes sense for us.*



LHM: *That experience came to you as a result of your 20+ years of work in this area. You also have programs where immigrant families come together from different cultures around food. After several dinners that were focused on the tomato, parents came to the museum and said they wanted to do an exhibit.*

MJ: *Yes, they did. They worked with us over six months to figure out an exhibit that would be culturally relevant and developmentally appropriate.*

Early on in our work with LADI, a group of Spanish-language media folks came to me about a holiday that is celebrated in Latin America but that is lost when people come to the United States. Many recent immigrants long for the Three Kings holiday. We were asked to celebrate it. It was not easy to compel my colleagues to rally behind a religious holiday—it's a risk, but we decided to do it. Of course, it's highly successful. We're now the largest Three Kings celebration in the Bay Area.

We had to weather criticism about what's right for a children's museum to do. [Critics said,] "If you decided to celebrate that holiday, what about other religious holidays?" It's about deciding as an organization what your goals are so that you can respond and withstand any criticism you receive.

LHM: *Share some personal reflections about what you've learned about your own leadership.*

MJ: *When I was Development Director and undertook LADI, I fundamentally wanted to do the right thing for the community. I was empowered to move forward with figuring out how to make that possible. The fact that it was successful gave me huge confidence in my ability to know what the right thing is. If I stay focused on the right thing for the people of San Jose, everything else falls into place.*

LHM: *There are some concrete things that you need to implement to support the organizational change. Supporting culturally competent staff, hiring a workforce, dedicating resources, talking with your board.*

MJ: *The advantage of being CEO is that I get to drive the agenda. I get to make hard decisions and tell everyone that they have to do it! When I became CEO, our audience-facing staff looked like the community, but the rest of the staff didn't. Four jobs became available. They were the next level jobs from floor to core staff. We hired from within, all positions were filled by floor staff, and all were people of color. We instantly had a far more diverse staff. Then we decided to add an associate director position, and I hired someone from the community who reflects our priority audiences.*

But it's not as simple as that. When you decide to promote floor staff to core staff, you need to provide resources to support them in being successful in their jobs. As CEO, I was able to allocate appropriate resources for training and support. On an ongoing basis, I'm committed to our diverse workforce. Every quarterly all-staff meeting has some kind of focus on cultural competence. We have an internal staff committee that undertakes projects that help us serve the diverse needs of our audience. Last year's group bolstered our efforts with the LGBTQ community, and we found money to install a gender-neutral bathroom. It's an ongoing commitment of resources and training.



Q&A WITH THE AUDIENCE

AUDIENCE QUESTION: *Is your board reflective of the community you serve?*

MJ: *We're trying. It's diverse but lacks the percentage of diversity that we're aiming for. We're systematically trying to improve that. It's ongoing work and it's challenging.*

AUDIENCE QUESTION: *What can you recommend to people here who aren't that high in the organization? We feel that [efforts to engage Latino communities come from the] grassroots in an organization. What can you tell us?*

MJ: *That's a good question. I'm sure there is not a single answer. The CEOs worry a lot about money. It wakes us up every morning. Think about a strong business case—CEOs will pay attention to that. It was how I started and how I won the support of the board. It's a good place to start.*

AUDIENCE QUESTION: *Did you meet your business goals?*

MJ: *Yes, we actually exceeded our business goals. The data that [our evaluator] Cecilia Garibay gathered looked at zip codes. People visiting from the top nine Latino zip codes in San Jose increased nearly 27%.*

AUDIENCE QUESTION: *How often do you do intercultural knowledge trainings?*

MJ: *At the all-staff meetings, which are quarterly, we always have some cultural competence training. It spans all kinds of diversity—the last one was from the Autism Center in San Jose. The floor staff meets monthly and it is part of their rigorous training to have issues around our diverse audience as part of their work. It is ongoing. The internal staff committee meets every other week for one full year. It represents everyone across the board, from floor staff through me.*

Responding to a question about leadership development, Jennings said: *I had the fortune of being part of the Noyce Leadership Institute. We spend a lot of time talking about that. Our museum along with the Association of Children's Museums and ASTC offer the Cultural Competence Learning Institute (CCLI), which is a year-long development program around organizational change and cultural competence. Six museums are included in the cohort each year. We spend a year together as the museums undertake a strategic initiative and we learn by doing.*

LHM: *[CCLI does] require direct CEO or c-suite level participation because we're after organizational change and sustained strategic change in that program.*

RELEVANT STEAM EXPERIENCES

STRAND LEADERS

Cheryl Juárez, Frost Science Museum

Verónika Núñez, Oregon Museum of Science and Industry

PANEL PARTICIPANTS

Juliana Ospina Cano, Senior STEM Manager, UnidosUS (formerly National Council for La Raza [NCLR])

Verónika Núñez, Sr. Community Engagement and Partnerships Specialist, Oregon Museum of Science and Industry

Antonio Tijerino, President and CEO, Hispanic Heritage Foundation

THE BIG IDEA: ISL/STEAM Experiences Are Not One Size-Fits-All

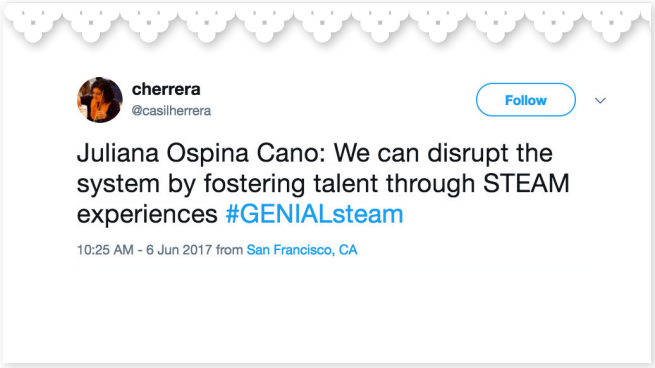


Participant word cloud by Claudia Pineda.



We need to develop guidelines of culturally relevant models and frameworks that acknowledge the legacy of STEAM in Latino communities and meet the needs of Latino children, students, and families.

Cheryl Juárez opened the session with a video montage of children engaging in STEAM activities. When the video was done, she asked participants to shout out words that came to mind: fun, family, pride, engagement, fiesta, success, the future, cooperation, equality, colorful, science(!), STEAM. She then guided panelists Juliana Ospina Cano, Verónika Núñez, and Antonio Tijerino through a discussion of some of the emerging themes of the Summit as they relate to STEAM programming.



NOT ONE-SIZE-FITS-ALL

The panelists discussed what "one size does not fit all" means to them.

Ospina Cano's work involves figuring out how to expose Latino youth to STEM when science is not being taught in school. Working with 33 schools in 8 states, she understands that "the Latino community is different in different regions." As a result, she and her team must be "intentional with our goals and the way we roll out a program."



Children exploring the River of Grass immersive digital exhibition at Frost Science, Miami. Photo by Alfonso Juárez.

"One size does not fit all" prompted Nuñez to share her family's experience as immigrants. Everyone in her family immigrated here at different times in their lives. Even coming from the same household, they all have different accents and "completely different experiences as immigrants." Discussing STEAM programs, Nuñez said, "Sometimes if things work, you want to replicate them. But things change…. I might think I know how to implement a program but the [next] community is completely different…. Training for educators has to be different [every time] because not every group of educators is the same." For Nuñez, these differences mean that, "We are learning how to do this job all the time." She emphasized the need to keep listening all the time and the importance of understanding that people are ever-changing.

Tijerino agreed that it is important to listen and to understand that things are different in every city where you might have a program. For him, these differences mean that "program people have to be the CEOs of their programs. [Leaders] have to trust that they know what they're doing." He also said it is important to trust young people to lead and to reach their peers. For his part, he must be "adaptive and agile."



Children learning about helping birds impacted by oil spills during the CHISPA afterschool science program at Brighton Park Neighborhood Council, Chicago. Photo by Cheryl Flores.

WHAT'S ON YOUR CHECKLIST FOR DEVELOPING A NATIONAL PROGRAM?

Juliana Ospina Cano

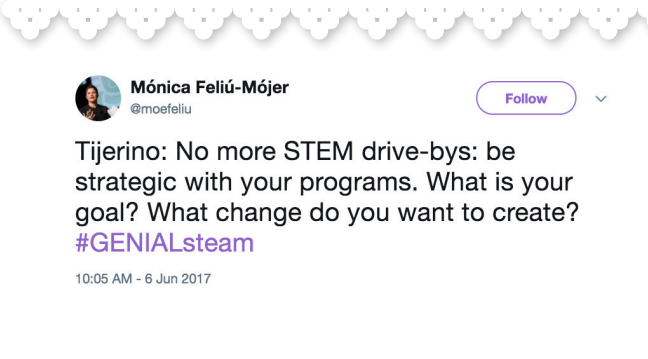
- ✓ Adapt quickly.
- ✓ Show cultural competence and humility.
- ✓ Collect feedback and make immediate modifications.
- ✓ Remember that we are working with human beings and it's all about the connections.
- ✓ The tamales and tostadas do matter.

Verónika Núñez

- ✓ Who can help me get this done?
- ✓ Surround myself with the people who help me plan and connect and build from there.
- ✓ Cultivate relationships that complement the way I am.

Antonio Tijerino

- ✓ Have the audacity to think you can make an impact with no funding.
- ✓ Celebrate being an imperfectionist.
- ✓ Rely on program staff to make it work.
- ✓ Have a diverse board and go to them for advice.
- ✓ The key to everything is follow up. Otherwise it's a "drive-by STEM shooting."
- ✓ Use social media to gauge interest and engagement over time.



RISK-TAKING

Juárez asked the panelists to discuss risk-taking, and to share examples of risks they have taken in implementing STEAM programs.

"I exercised my voice as a Latina in power." When NCLR's [National Council of la-Raza] Escalera STEM program in the Gulf Coast was not initially successful, Ospina Cano asked her supervisor for permission to travel there and spend time observing the program. She met with the superintendent, teachers, parents, and started to learn how the community saw the program. It wasn't working because "they didn't know what Escalera STEM was, they didn't know what STEM was. They were barely learning English in school, let alone science." Ospina Cano invested a semester "building intentional and honest relationships. I was being true Juliana: authentic, first gen, Latina with an accent, myself, NCLR." Little by little, enrollment in the program grew, and the instructor has now expanded the program with outside funding. Ospina Cano explained, "I exercised my voice as a Latina in power. I had limited power, but I exercised my voice with a business plan. Now Escalera STEM is in six markets outside the Gulf Coast…. It was hard. But if we don't go there as NCLR, then who will go there?" For Ospina Cano, the experience "was a good lesson on exercising judgment, but backing it up with data and sound business practices."

"Bringing my passion of my other loves into my work." Núñez also discussed finding her voice in terms of "bringing my passion of my other loves into work. I need to bring something I really love to the table." She described a project she was doing at OMSI [Oregon Museum of Science and Industry] on engineering, at the same time she was doing a community theater show—*Cinderella* with puppets. The puppeteer was not an engineer, but he was doing engineering work: iterating, trying new things. So Núñez brought him into the OMSI classes, to talk about other ways of approaching the engineering process. Now, the theater is doing a show about female engineers, with puppets and birds. In terms of bringing her interests to her program, Núñez said, "Sometimes it hasn't worked—it's clearly something to rethink. In taking those risks, I have found that some things can really work. Usually when I am passionate about something things will shine. I bring projects or topics that I like, people that I like. My family volunteers in the museum all the time."

It took time for Núñez to feel comfortable enough to start taking these risks, but as she explained, "I found my voice and have found that people more senior often want to incorporate my voice. In the last few years I have felt really empowered in the museum…. It's about finding my voice and believing in myself. As I do that, people approach me more."



"It starts with the confidence to fail." Discussing his long history of taking risks, Tijerino said, "It starts with the confidence to fail. You have to have the absolute confidence to stumble and learn from those stumbles." He shared an example of taking his daughter's eraser away when she was drawing and telling her, "stop trying to make art right. You have to be able to take the mistake and take them in a different direction." He has the same view about leading a program or organization. "When you're hit with things like recession and funding challenges and problems in your organization, you have to be able to weather those. You can have all the plans you want until you get hit in the face, and how you react to that punch in the face is the most important." As a leader of an organization he said, "You can't be so focused on everything being perfect. I embrace mistakes. They take you in remarkable directions." If you are going to be a leader, "You have to have the audacity to think that you can make a change. You have to focus on the impact you want to make and work backward from that. You have to trust those around you. That's where the confidence comes in. I don't know some of the things that are happening in my own organization. My job is as a cheerleader, a facilitator, and a connector."

Leadership Styles

Juliana Ospina Cano: *I'm a checklist kind of person.*

Verónika Núñez: *I have a hard time with traditional ways of planning. I'm an artist at heart. I see images and colors and music. I see how they are supposed to look and feel, but have a hard time making that happen. My way of planning is different.... It was hard to try to match what other people do. I have cultivated relationships that complement the way I am.*

Antonio Tijerino: *I heard a lot of people talking about my style: impetuous, impatient, scrambled, scattered. Then I got an award from Mexico. Suddenly that became agile, innovative, action-oriented. Reckless became a risk taker. Free-form leadership has worked for me.*

Juárez mentioned the Hispanic Heritage Foundation's Hispanic Heritage Youth Awards. Tijerino responded that, ultimately, the mission of the Hispanic Heritage Foundation "is the value proposition that we can

define as the Latino population in America. We've been devalued in terms of what we provide this great country to move forward. We have value in the STEM fields. As a community, we've been very noble in terms of the workforce. We've built buildings, fought wars, we pick food, serve food, take care of babies. Now the workforce needs us to be engineers, scientists, physicians, technology leaders, entrepreneurs, educators. We're trying to bridge into those jobs that are needed now. Our community will always come through to help this country move forward."

Q&A WITH THE AUDIENCE

AUDIENCE QUESTION: *Comment on how you're empowering kids to give back to their communities, not just getting jobs.*

PANELIST RESPONSES

Ospina Cano: *One piece of NCLR's impact is disrupting the system by providing students with the skills they need to break the system. From a civil rights perspective, if we can give kids the skills they need, and build the pipeline by fostering talent, then we can disrupt the system. NCLR programs are the only science our kids get. We are developing agency, celebrating their culture, celebrating their language.*



Núñez: *Choosing partners or communities or organizations that are already doing that work is important. OMSI works with an organization called Adelante Mujeres. It is rooted in the community. It's very small. They hire from within the community and they do programs in the community—from agricultural to educational to business projects. They come to the museum and we go there to implement some of OMSI's programs. I connect what I am doing to what is already happening in the community. Find what's happening in the community—smaller organizations that will benefit from having these programs. They can make the program theirs after your grant is done.*

Tijerino: *Everyone has a responsibility to represent our community and go back into our community. Chances are you'll be the only Latino or Latina in the room. You do have a responsibility as a Latino in the STEM fields to go back. Francisco Colon is an inspiration. We need to understand the value proposition that we offer. That's why we do the coder summit, so you don't feel like a brown unicorn with a laptop when you take a computer programming class.*

AUDIENCE QUESTION: *How do some of the challenges—for example, continuation of projects—affect the way you reach out to your audiences? How do you supplement, implement, and sustain that involvement?*

Ospina Cano: *The main issue we have at NCLR working with 33 schools is that we train staff one summer and have new staff the next summer. The wealth of resources, institutional knowledge, and content knowledge in STEM is lost. Having those crucial partners is important. It's a challenge. We need leaders and CEOs to cultivate and retain talent. Multiyear funding is also important to attract and retain project teams. We are making progress. CHISPA [Children Investigating Science with Parents After School] affiliates only have $5,000 a year and we serve 1,000 students in one semester. The power of communities is strong if we're there to support them.*

WHAT GENIAL PARTICIPANTS SAID ABOUT ORGANIZATIONAL CHANGE AND RELEVANT STEAM EXPERIENCES

Participants adjourned to breakout rooms to reflect on the panel discussions on organizational change and relevant STEAM experiences. As described elsewhere in this report, during the breakout sessions they discussed the following questions:

1. What emerged during the panel discussion that was new to you?
2. How did the panel content shift, or not shift, your thinking about your work?
3. What needs to be done next (recommendations, actionable insights, emerging research questions)?

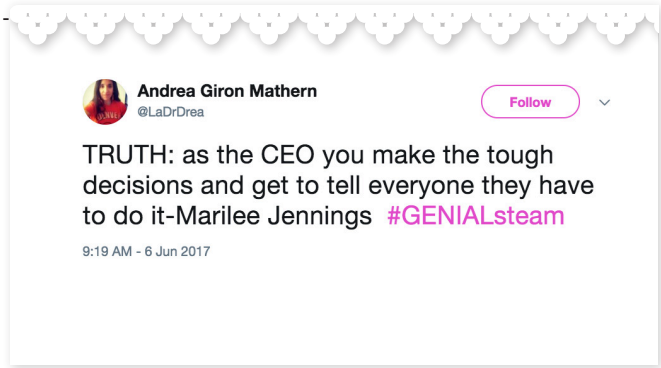
This section presents some common themes and takeaways from the discussions of questions 1 and 2. A synthesis of question 3 appears in the section What Needs to be Done Next?

Leadership. The panels reminded GENIAL participants of the importance of strong leadership and the power of a good CEO.

- "Cheerleader, facilitator, connector"

Participants were particularly inspired by what Marilee Jennings accomplished at Children's Discovery Museum.

- [The Children's Discovery Museum presentation] was awesome and inspiring.
- We need more people like her. How did she become so enlightened?
- All departments working together to achieve shared goals.



- Vision and support throughout the organization to meet the vision.
- Create a clear mission.
- Outreach needs to be ongoing rather than only opportunistic.
- The idea of constructing an approach to engagement and then keeping your eyes out for opportunities such as an exhibit [was new].

Risk-Taking. The panelists' continued encouragement to take risks was empowering.

- Risk-taking is important!
- It's OK [to make mistakes].
- [Have] confidence to fail.
- We teach kids to take risks, but it's hard to remember [that] as professionals.
- "Just try it!"
- [Having the b]ravery to address sensitive issues (i.e., hosting a religious ceremony on Three Kings Day).
- Having the bravery to fail.

Making a Business Case. For many participants, the idea of making a business case was new, and they began thinking about how they might make a case in their own institutions.

- Making a business case is important.
- Making a business case that validates a good decision.
- How to have more of a business approach when engaging with leadership.
- How do we empower staff to understand what a business case is?
- What is motivating in a business plan?

Capacity Building and Staff Empowerment. Messages about supporting and empowering staff resonated with GENIAL participants.

- Make diverse staff feel comfortable.
- Empowerment of staff to be Latino/a, to thrive and be their whole selves.
- Allow staff to incorporate their passion into their work/your mission.
- Provid[e] a lot of room for staff to make decisions about programs.

- How do we build teams that are diverse enough but not so diverse that they can't focus?
- How can I move forward without institutional support? Send email to my boss? Find allies?

The panels also raised thoughts about hiring and promotion.

- Move people from floor staff to core staff to increase diversity and give voice to people from the community.
- Hir[e] from within. Enhanc[e] professional growth in the organization.

Training emerged as an important piece of the puzzle.

- Internal and external training makes good business sense.
- Sustain long-term support and training.
- Incorporate cultural competency in all staff meetings.
- Cultural competency training needs to be a big part of our work, but what does it look like?

Knowing, Respecting, and Engaging the Community. Previous themes of co-creation and building trust with the community also emerged during this breakout session.

- Build trust.
- Learn more about the communities where the museum is.
- Listen to the community and your audience.
- Trust young people. Look to them for guidance.

Power dynamics, along with the need for respect and humility to understand the community, also were topics of discussion.

- Power dynamics discussion hasn't progressed—power dynamics need to be acknowledged/recognized/addressed.
- "Making accessible" is seen as "dumbing down." Simplification as a power broker.
- Families make sacrifices to attend our museums.
- "Persistence is in our DNA."

Some participants were struck by the idea of using Spanish-language media to build relationships.

- Spanish-language media [is] a strong platform for the community.
- Spanish-language media [i]s a resource beyond just the PR function—partner, [as a] way to build trust in the community.



Transferring and Adapting Successful Practices. The contrast between LADI and VADI at Children's Discovery Museum reminded participants that successful strategies are not always transferable.

- Diversity in audiences was interesting. What are best practices for expanding to other audiences?
- The LADI approach was new. Thinking about how to adapt it for millennials.

Resourcefulness. GENIAL participants appreciated the panelists' strategies for making the most of limited resources.

- We don't have to reinvent the wheel. Partner with other organizations to best serve the community.
- Be scrappy: what can you do on a limited budget?

WHAT NEEDS TO BE DONE NEXT?

An important goal of the GENIAL Summit was to "[i]dentify recommendations, emerging research questions, and actionable insights with an outlook toward the future." The GENIAL team and advisors designed a process to accomplish this goal that is described in detail elsewhere in this report. The consensus-building process revolved around the following question, which participants discussed in each of their three breakout sessions over the course of the Summit: What needs to be done next (actionable insight, recommendation, emerging research question)?

During each breakout session, participants engaged in a voting process that identified the top priorities for their group, then the priorities for each of the three breakout rooms were presented to the entire group. Across the Summit's three breakout sessions, the slides revealed considerable overlap and convergence toward a focused set of priorities.

Based on the participants' voting process and a subsequent synthesis of the breakout slides, the following 10 action items emerged as the most important to GENIAL participants. These items do not appear in a ranked order.



1. **Identify, acknowledge, and address issues associated with the existing power structure.** Several discussions at the Summit focused on power dynamics within scientific and science learning institutions and the dynamics between these institutions and nondominant audiences. These discussions prompted GENIAL participants to suggest ways of addressing power imbalances. For example, informal science learning institutions can examine the

assumptions behind their goals for engaging Latinos in STEAM. They can also strive to invert the relationship between the informal science institution and audience(s) to change the power structure and allow more power sharing.

Language is an important aspect of power dynamics because words are loaded with inherent meaning and experience. As an example, "tinkering" does not translate directly into Spanish. When nonnative English speakers encounter a word like "tinkering," they might experience a cultural disconnect in addition to the challenge of translating the word into something meaningful. To reduce power imbalances that are associated with language, informal science learning institutions should understand that visitors need to build on the foundation of their own language, and consider the language accessibility and relevancy of their exhibits and programs.

2. **Make the internal argument for the value of engaging Latinx communities.** GENIAL participants recognized that engaging Latino audiences requires an institution-wide commitment. That commitment can start at the grassroots level, with staff making the case to the CEO about the value of connecting with Latino audiences. Or, it can begin with the CEO making the case to the board of directors. Both of these scenarios require a clear identification of the goals and assumptions behind engaging Latino audiences—for example, asking "To what end?" Regardless of who makes the case about the value of engaging Latino audiences, data can be a valuable asset to support the need.

3. **Engage in sustainability planning for organizational leadership and programming.** A recurring theme of the GENIAL Summit was that it takes time and sustained effort to build trust and meaningful relationships with the community. Turnover in informal science learning institutions and community organizations, combined with the relatively short duration of many grants, can jeopardize the long-term success of efforts to engage Latino audiences in STEAM. For this reason, GENIAL participants recommended that institutions undertake systematic planning to ensure that the vision, practices, and commitments to community collaborations and engagement continue when key leaders or champions leave.

4. **Increase board and staff diversity.** The GENIAL panel discussions reminded participants that when organizations are not diverse, the few staff members who reflect the community often bear much of the responsibility and burden for diversity or outreach initiatives. Ideally, the responsibility for engaging Latino audiences in STEAM should rest with everyone, not just Latino staff.

   GENIAL participants agreed that a more diverse workforce is needed at all levels of informal science institutions—from floor, program, and research staff to institutional leaders to boards of directors. They recommended that institutions set concrete targets for staff diversity and act on those targets. To achieve their goals, institutions can actively seek diverse candidates during the hiring process, and develop leadership paths to identify and train Latino leaders as part of a sustainable organizational path.

5. **Support and empower staff to engage Latino audiences.** Although hiring diverse staff is important, panelist Marilee Jennings said, "…it's not as simple as that. When you decide to promote floor staff to core staff, you need to provide resources to support them in being successful in their jobs." More generally, supporting a diverse workforce to meaningfully engage with diverse communities requires an ongoing commitment of resources and training. In addition, systems should be in place to acknowledge the time, resources, and skills needed to support translation and high-quality community engagement.

   For GENIAL participants, key needs for staff training include cultural responsiveness and making a business case to the CEO on the importance of engaging Latino audiences in STEAM. Participants also recommended that a new leadership institute for professional development, training, and support should be developed. This network should include community representation, be regional and affordable, and encompass people from every level of the institution rather than just high-level leaders and managers.

6. **Embrace risk-taking.** A major message of the GENIAL Summit focused on risk-taking at the individual, institutional, and community levels. Appreciating both the value and challenges of risk-taking that were discussed throughout the Summit, GENIAL participants recommended that supervisors and institutions find ways to empower staff to take risks and reframe "failure" as a positive part of the learning process. They also suggested that institutions might develop sub-units that serve as idea factories for experimentation and rapid prototyping of STEAM programming—similar to the "skunkworks" model that is used to spur creativity and innovation in business by providing small project teams with high levels of flexibility and autonomy.

7. **Recognize and incorporate the values of the community in ways that authentically involve them in the development of activities and initiatives.** Co-creation of informal STEAM learning experiences was another central theme of the GENIAL Summit. A key goal of co-creation is to move from simplification of STEAM content to amplification by connecting the content with the experiences, values, and interests of the community. Co-creation is important for informal science learning institutions because it can help to reduce power imbalances by eliminating the idea of "us" and "them."

   Meaningful co-creation of activities and initiatives requires informal science learning institutions to go beyond involving the community to becoming part of the community so that they can better understand their audiences. Ensuring community representation at all levels and stages of a project will help build the needed trust and understanding. It will also increase the likelihood that the visit connects with the visitor's life experiences to the greatest extent possible.



8. **Develop a deep listening process among all institutional partners to create a flexible, collaborative strategy.** GENIAL participants recommended the establishment of a formalized listening process during the co-creation of activities or initiatives. This listening process should involve all partners in a program or initiative: internal staff, including the CEO; external partners; and outside audiences. It also should include listening milestones at each step of the program design process. Such a process would help deepen trust and mutual understanding, build relationships, and enable partners to develop strategies that are responsive to the needs of all.

9. **Ensure that activities and initiatives emphasize parents, family engagement, and role models for young people.** Discussions at the GENIAL Summit emphasized the importance of *la familia* and focused on Latino youth as the STEM workforce of tomorrow. It is important for institutions that are engaging Latino audiences to validate and value parents as the most successful teachers serving children. In terms of young people, GENIAL participants recommended using STEAM programming to provide youth with the skills and tools they need to eventually disrupt the existing power structure. These activities should include a systematic and concerted focus on providing role models for Latino youth in STEM.

10. **Keep GENIAL participants connected in ways that advance the field.** Participants were interested in how the GENIAL cohort might foster and promote collaborations that might include others beyond traditional corporate and academic partners. To that end, they recommended establishing a networking space to continue the GENIAL conversation and share projects and practices, what works and what doesn't work, and common challenges and opportunities.

    To bring the field up to already known "best practices" for co-creating informal STEAM learning experiences with Latino audiences, the GENIAL network might co-create or share examples of guiding principles, promising case studies, and evidence-based strategies. These strategies and principles would cover topics such as community building, learning about the audience, approaches to engage family and community, and creating and maintaining ongoing external partnerships. In addition, the GENIAL network might also collaborate on a design-based research approach to develop and test much-needed cultural competency models and plans for the field.



CLOSING

AUDIENCE IMPRESSIONS AND EXPRESSIONS

In the final session, GENIAL participants used easels to document their impressions of the Summit. Their expressions are captured in the image below.



REFLECTIONS FROM GENIAL ADVISORS

Cecilia Garibay: *It's been exciting to see the interrelationships between the strands and the conversations. I have been reflecting since this morning about the sustainability of what has happened here. Bob [Russell of NSF] spurred that conference 10 years ago. We can't wait that long again. What can we do to continue the work that has happened here?*

Cheryl Juárez: *This has been very encouraging for me to be willing to risk going against the tide of the one-size-fits-all for engaging Latinos in STEM. Because it's easier to do one program, and if Latinos come, great. If they don't, oh, well. Taking the risk to say, "No, that's not going to work. We've tried that, and it doesn't work. Let's try things we think will work. Let's bring in some community advisors. Let's do some things we haven't done before."*

Salvador Acevedo: *I'm afraid. Yesterday I heard several times that we've been having these conversations already. My fear is that we're spinning wheels. If I think about it I have good reason to say, "no we're not spinning wheels," but I don't know. The Latino audience is a tough animal to define. The conversations that we've been having are way more sophisticated and deeper and diverse. I'm always interested in hearing what kids [in the*

Exploratorium] think about the experience. Today I was talking with someone in the museum who felt like there [were] a whole lot of Latino-looking kids. I wonder if they are having a significant experience enough that it will inspire them for life. But yesterday and today here I feel like we might be spinning wheels.

Paul Dusenberry: *One phrase that relates to community collaboration efforts is "progress at the speed of trust." Trusting in your community partners (and they in you) plays a key role in successful collaborations." Trust and respect, and just having a body of people who are willing to work together, connect together, to solve the great challenges. It is scary if we're just talking amongst the choir. It's not the choir that we need to preach to, it's the public and the leaders of the organizations. One thing I would love to encourage all of you to do is reach out to public libraries and so many other organizations like them. Community organizations coming together to solve intractable, difficult, scary, wicked problems. It's that kind of connected opportunity that we all have. All of you are leaders. We need to cultivate this leadership in people who aren't here. I'm thrilled and privileged to be part of you and help you work with communities like the public library system in any way that we can. We're here to help so that we cannot spin wheels but move forward.*

Julie Nunn: *I've been talking to my colleagues at the Exploratorium and putting a sense of urgency around the work we've been doing in the last couple of days. I have a different background than most of you. This was a learning experience for me. One of the big reflections in the past couple of days is that you need more people with different backgrounds that you can leverage as allies. We talked about power struggles. Well, I want to put a face on that power struggle and get them in the room to have a conversation. It's a struggle to get people on your team and moving in the right direction. To take it up another notch, you're going to have to get the hard people in the room. Change is messy, chaotic, emotional, and can feel offensive. But you have to get in the mud puddle and get dirty to make change. I can be a learning ally to this community. I'll stumble, but I'm in there and I'm ready. People like myself can help to leverage the conversation and ask the hard question to those who need to hear it, and have the hard conversation.*

Laura Huerta Migus: *I have a couple of thoughts around decolonizing our thought processes, for really creating your own cultural space around it. I was brought up in a culture of trying, not of failure. That's what we do. My people, we do. When we talk about, "What's another language for failure?" No, we just keep trying, that's what you do. Mistakes are just what happen when you try, and then you try some more.*

To Salvador's point about talking about the same things and fear—one of the things that comes up for me is what we're not saying, why we're having the same conversation. We use these nice words like "disruption." But we're actually talking about the revolution of a system. It's dangerous. I think about being very aware—not shying away from, but being aware—that this is dangerous work, so how do we keep each other safe.

We thought we were going to tie this all up and say "Here's the plan for going forward." But there is no plan, because we participated with you today. You shared incredible strategies, and tactics for moving forward. That was really brave. You all were really brave in the last day and half. I leave you all with that gratitude for being brave.

Thank you to our advisors for doing this, and the incredible contributions that they've made to create brave spaces and brave conversations.

NEXT STEPS

Verónica García-Luis thanked the advisors and discussed next steps.

1. Post-Summit survey. This feedback is very important to help us keep the conversations going and sponsor new projects and ideas.
2. #GENIALsteam is alive and well on Twitter. Thank you for contributing, and continue contributing if you feel inspired. Thanks to *Las Lauras*[8] for being our resident tweeters!
3. Strand leaders will be co-authoring articles on the strands.
4. The conversations over the past couple of days will be synthesized into a report.
5. We'll be doing ASTC and CAISE webinars to disseminate the work.
6. We'll continue to put resources on the GENIAL website, including the slide decks.

García-Luis concluded with the following words of encouragement: "We hope that you've connected with new people, partner up, write those grant proposals, go after those projects, start to pursue those emerging research questions. That's how we'll move this conversation forward."

CLOSING INVOCATION

Doña María O. Ávila Vera offered a closing invocation in Yucatec Mayan. Verónika Núñez translated the remarks into English.



8 Laura Peticolas and GENIAL advisor Laura Huerta Migus tweeted highlights from the Summit.