Engaging Bilingual Audiences

www.nisenet.org
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<th>Time</th>
<th>Session</th>
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<tr>
<td>9:00</td>
<td>Welcome</td>
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<tr>
<td>9:15</td>
<td>GROUP ACTIVITY— Zip, Zap, Zop</td>
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<td>9:45</td>
<td>Equity of Effort</td>
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<td>10:15</td>
<td>Social Break</td>
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<td>10:30</td>
<td>Audience Engagement &amp; Inclusion Strategies</td>
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<td>12:00</td>
<td>Lunch</td>
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Year 8 NISE Network Teams

**Network Community**
- Community
- RISE
- Website

**Public Engagement**
- NanoDays
- Programs
- Exhibits

**Building Capacity**
- Online Brown-Bags
- Team-Based Inquiry Professional Development
- Inclusive Audiences
- Universal Design Workshop
- Bilingual Workshop

**Knowledge for the Field**
- Evaluation
- Research

**Network Leadership**
- NEG NOG
- Administration
- Project Coordination
Inclusive Audience Goals

To increase professional and institutional capacity to effectively engage underserved and underrepresented audiences in nano topics

Strategies

• Help define target public audiences
• Serve as a resource and audience advocate
• Identify, create, and share resources, tools, and guides
• Provide diversity and audience engagement PD opportunities
• Share successful efforts to reach underserved audiences
• Foster partnerships with other ISE’s & CBO’s
Workshop Goals

Overarching Goal:
To inspire confidence and build capacity for partners to engage bilingual audiences in nanoscale science, engineering, and technology (nano).

As a result of participating in the workshop, professionals will:

1. Develop a rationale for engaging bilingual audiences in nano, and see bilingual work as an emerging practice.

2. Build awareness of and facility with educational and professional tools and strategies (both NISE Net and outside resources), to better engage bilingual audiences.

3. Connect with other professionals engaged in bilingual work by sharing personal experiences and learning together.

4. Identify opportunities for action by problem solving challenges and articulating next steps.
Our work is a journey...
Group Activity: Zip, Zap, Zop
Equity of Effort: Serving Underserved Audiences
Exploring Terms

Pair Share Activity:

Turn to the person on your right/left and take some time to define the following terms.

Equality/Equity
A Question of Equity

• Acting Equitably implies taking actions
  • that differentiate needs and
  • that apply policies and practices according to the different needs of groups

• Equity of Effort to reach underserved audiences
Social Break
Audience Engagement & Inclusion
Overview

• What is audience engagement/inclusion?
• Building an Audience Rationale
• Focus on Audience & Demographics
• Using Research to Engage Diverse Audiences
• Exploratorium Case Study
• Resources
• Case Study Activity
Audience Engagement/Inclusion: What does it mean to you?

• What?
• Why?
• How?
• Motivations?
Inclusion to Cultural Competence – Working Definitions

- Diversity
- Inclusion
- Culture
- Cultural Competence
Opportunity for Reaching Diverse Audiences

Why use an Inclusive Audiences approach?

• ISE’s are uniquely situated to educate the public, inspire youth, and provide access to learning experiences.

• Inclusive approaches help reach all audiences more effectively.

• NISE Net seeks to address the information gap and inspire future STEM leaders.

• It allows us to go beyond education and inspiration to **equity**, empowerment and social justice.
Network Audiences

- Family groups
- Adult-only groups
- Younger children (8 and younger)
- Out-of-school time program participants
- School groups
NISE Network Audiences

Priority Underrepresented Audiences

- Spanish language preferred
- People with disabilities
- Girls
- Ethnic minorities underrepresented in STEM (African Americans, Latinos, Native Americans)
Nanotechnologies are likely to open gaps by gender, ethnicity, race, and ability status, as well as between developed and developing countries, unless steps are taken now to create a different outcome.

Some groups in our society have been systematically relegated to the margins of society and therefore have limited opportunities to make informed choices about new technologies.

These groups often bear the brunt of unintended negative consequences occasioned by the development and application of new technologies.
Changing Demographics in U.S.

U.S. Population 1960-2050

% of total

Workforce Readiness

Growing Hispanic Population in U.S.

51.9 million Hispanics lived in the U.S. in 2011...

- 35.2 million in 2000
- 51.9 million in 2011

An increase of 48% from 2000

Pen Research Hispanic Center tabulations of 2000 Census (5% PUMS) and 2011 American Community Survey (1% PUMS)
Changing Demographics in Museums

Source: Museums and Society 2034, Center for the Future of Museums, AAM
What’s Your Audience Engagement Elevator Pitch?
Using Visitors Research to Better Engage Diverse Cultural Communities

Cecilia Garibay, PhD
Culture

• Complex
• Socially constructed
• Dynamic
<table>
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<th>General Research Focus</th>
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<td>Leisure values &amp; decisions</td>
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<td>Perceptions of museums</td>
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<td>Barriers to museum visitation</td>
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<td>Potential opportunities for engagement</td>
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Methods
Leisure Values

Family

Education

Benefits
Leisure Values: Family

- Participate as a family unit
- Entire group can engage
- Particularly prevalent among participants in lower socio-economic situations
Leisure Values: Benefits

- Relaxation and enjoyment
- To some use/benefit
  “Aprovechar”
  - Physical
  - Mental
  - Emotional
  - Spiritual
Leisure Values: Education

- Education is highly valued
  *Reese et al., 1995*

- Conceptions of education may differ

  *Educación*

- Conceptions of parental involvement may differ
  *Zarate, 2007*
Museums Perceptions: Positive

• Preserves the past
• Cares for important objects
• Educational
• Can be inspirational
Museums: Barriers

- Lack of awareness
- Not feeling welcome and represented
- Lack of cultural relevance
- Language
Contact:
Cecilia Garibay
cgaribay@garibaygroup.com
773-327-9006
Demographic Resources

- US Census Bureau
  http://www.census.gov/main/www/access.html
- Pew Research Center
  http://pewresearch.org
- Pew Research Hispanic Center
  http://www.pewhispanic.org/
- Center for the Future of Museums
  http://www.aam-us.org/resources/center-for-the-future-of-museums
- Local United Ways, School District Planning and Evaluation
  (school population data)
Additional Resources

• SciGirls Working with Latino Families Guide
  http://scigirlsconnect.org/page/work-w-latino-families

• ASTC Diversity and Equity Resource Center
  http://www.astc.org/resource/equity/index.htm

• ASTC Multilingual Landscape Study pdf
• Bilingual Exhibits Research Initiative (BERI) Project pfd
• NISE Translation Process and Bilingual Graphics Guides
• NISE Partnership Strategies Guide
Summary

• Be focused and clear about which audience(s) you’re engaging
• Develop your audience rationale and align with mission
• Gather research on your visiting audiences and the audience you’re trying to engage
• Build strategic partnerships
• Prototype offerings so you can figure out what works and what doesn’t (get feedback!)
Lunch
Agenda—Afternoon Day 1

1:00   GROUP ACTIVITY -- Scavenger Hunt around CMH
2:20   Partner Share out: Bilingual Projects
3:30   Social Break
3:45   GROUP ACTIVITY= Bilingual PSA’s
4:15   NISE Net Bilingual Resources
4:55   Closing remarks
5:00   End for day
Group Activity- Scavenger Hunt
Group Activity—Scavenger Hunt

Explore Children’s Museum of Houston

Explore CMH with an eye for how information can be presented to bilingual audiences.

• Use the Scavenger Hunt list to find examples of bilingual signage and programming.

• Use the iPads provided to document your examples.

(Note: not all items on the list necessarily have examples in CMH)

Meet back here at 1:45pm
Group Activity—Scavenger Hunt

1. What was surprising/unexpected about your visit?
2. Share something that got you inspired and would like to see happen in your institution
3. Something you didn’t find here but you have in your institution
Part 1: Partner Share Out of Bilingual Projects
Overview

Introduction

• Children’s Museum of Houston, TX
  • Aaron Guerrero

Partner Presenters:

• Saint Louis Science Center
  • Paul Freilin
• Imaginarium of South Texas, TX
  • Alejandra Ovando
• Informal Science Learning Associates, TX
  • Jose Perez
• Children’s Museum of Houston, TX
  • Tiffany Espinosa
• Miami Science Museum, FL
  • Karlisa Callwood
Saint Louis Science Center

Cultural Events and Community Partnerships

Paul Freiling
Director, Engineering Education
pfreilin@slsc.org
www.slsc.org
Society of Hispanic Professional Engineers (SHPE)

A partnership focused on connecting the SLSC more deeply with the St. Louis area Hispanic community.
North American Taiwanese Engineers Association (NATEA) Symposium

A one-day public symposium on renewable energy and sustainable living. The symposium provided an opportunity for NATEA to share scientific information with public audiences, and gave an opportunity for visitors to talk with local scientists.
Pulse St. Louis: The Science of Music

An annual event that showcases performers expressing their ethnicity by way of dance, song, instruments and/or plays.
FIRST Robotics International Friendship Day

An event that brings together International FIRST robotics teams competing in the FIRST Robotics Championships with St. Louis area robotics teams.
Cultural Events and Community Partnership Successes

- Increased relevance to local and international communities
- Increased public and institutional awareness and understanding of cultural communities located in the St. Louis area
- Community and School Outreach support
Working with Bilingual Audiences
Laredo, Texas, lies on the Texas-Mexico border, approx. 150 miles southwest of San Antonio.

95% of its inhabitants are Hispanic; approx. 29% of them live in poverty.

Our guiding principles:
Provide authentic experiences
Provide family activities
Invite positive role models
(Female engineers)
Including college-bound youth volunteers
Provide sensory experiences
Go where people are: Outreach
Informal Science Learning Associates of Laredo (ISLA) Summer Camps!
Register online at www.wowsciencelaredo.org

ISLA Camps at Lake Casa Blanca

• Nature Safari       June 17-21   6y-12y
• Engineer It!         July 8-12     8y-13y

Laredo’s awesome & coolest place
to beat the heat this summer!

$140/camp – Mon. thru Fri., 9am-3pm (early drop off at 8am)

Explore the natural wonders at the Lake, find out about Habitats, Plants, and Bugs, of course!
Or be the Engineer! Create, design, build contraptions on the shores!
Morning hikes only - Sack Lunch, Closed-toe shoes & Sunscreen required - Snacks & water provided
Texas Parks & Wildlife Park Interpreter Holly Reinhard joins our explorations!
Social discourse in native language
Our staff is bilingual
Interesting and engaging activities respect all kinds of learners and speak in a universal language.
5300 San Dario, Ste. 505
Mall Del Norte
Laredo, Texas 78041
Nano Science Kits
Bilingual Audience
Children’s Museum of Houston

Tiffany Espinosa
Para Los Niños Coordinator
tfontenot@cmhouston.org
www.cmhouston.org
• 100% of all exhibit text is English/Spanish bilingual

• 45% of Museum’s public contact staff is English-Spanish bilingual including staff who manage and facilitate outreach programs

• 20% of Museum’s Parent Resource Library collection is in Spanish

• Each of the Museum’s 13 English-Spanish bilingual Family Learning Guides contain on average 50 pages of activities that families can do together at home to help children build academic skills and knowledge
Bilingual Story Time
Parent Stars

• Each family receives a special Museum-created guide filled with ideas for at-home learning activities
  – Distributed 8,567 of these last year

• Served 25,220 parents and children at 93 Family Learning Events and 80 Parent Workshops in and around Houston last year
Para Los Niños

- Provides facilitators with free materials via our website
- Served 10,049 children and parents at 41 community sites
Family Adventures

• Served 10,638 children and adults from 40 community sites
Family Literacy Involvement Program

- FLIP is a city-wide system for increasing family learning through the circulation of 2,040 literacy kits loaned through 35 public library branches.

- Each Kit includes a book and a related activity with all of the needed materials. All are available in English and Spanish. A portion is available in Chinese and Vietnamese.
NanoDays at CMH

- Bilingual Activities throughout Museum
- Bilingual Museum Nano signs posted throughout Museum
- Bilingual flyers handed out at outreach events weeks before
Social Break
Group Activity: Bilingual PSA’s
Bilingual PSA’s Conversation

1. What things did you notice were different between the videos? (Spanish and English)
2. What considerations do you think we had to make when we recorded the Spanish versions?
3. How can you use these videos in your institution?
NISE Net
Bilingual Resources
Translation Process

1. Original Spanish translation from final English copy
2. Professional language review
3. Spanish science content review
4. Evaluation and remediation (recommended)
5. Final changes review and proofreading
6. Final Spanish version
Where can you find nano?

Bilingual Educational Products
Website for educators - nisenet.org

Catalog in Spanish
- Programs
- Exhibits
- Tools and guides
- Media
- Graphics
Search the Catalog

Search the catalog by audience, topic, or season.
Programs
Bilingual guides
Bilingual Videos

- Intro to Nano
- How Small Is Nano?
- What Happens In A Nano Lab?
- Nano and Me
Products in Catalog

NISE Net Products
- Created with NISE Network funding
- Development process:
  - scientist review, peer review, & evaluation
- Standards and templates
- Encourage free sharing and adaption

Linked resources
- Created with other funding
- Vetting process
- Different rights ownership/attribution

Creative Commons license clarifies use
Website for the Public

- Videos, podcasts, activities, links
- List of mini-exhibition locations
- Audio Description in English and Spanish

whatisnano.org
Closing Day Announcements

Museum is open until 8:00pm
Meet at 6:15 pm in the hotel lobby for dinner at Mia Bella Trattoria
If you’re checking out of the hotel tomorrow, you can bring your luggage