Listening to Children: Inviting, Documenting, and Using their Input

• What do you wish you could find out from children?

• What barriers do you face to getting children’s input on exhibits, programs, or other experiences?
Talking with Children about Play and Learning

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Associate Professor of Psychology
North Central College
DuPage Children’s Museum Academic Research and Evaluation Partner
Researchers such as Cindy Dell Clark, have advocated child-centered approaches to completing research with children. Dell Clark argues that traditional research approaches “sometimes ventriloquizes children rather than directly consulting children, using adults as proxy to report on child experience” (p. 6).

Child-centered research is “characterized by an emphasis on children’s own concerns and salient issues” (p. 16) through “approaches that invited kids to narrate, show and tell, photograph, illustrate, or to be playfully engaged” (p. 17).

Three studies

<table>
<thead>
<tr>
<th>Individual Interviews about Play and Learning</th>
<th>Focus Group about Play and Learning</th>
<th>Individual Interviews about Social and Emotional Learning through Play</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 children ages 4-10 interviewed</td>
<td>Group of 2\textsuperscript{nd} grade girls</td>
<td>100 children ages 4-10 interviewed</td>
</tr>
<tr>
<td>Recruited from the Museum floor</td>
<td>Participated in a citizen science day at the Museum: learned about audience research at the museum then participated in the focus group</td>
<td>Recruited from the Museum floor</td>
</tr>
<tr>
<td>Questions: defining play, play preferences, play partners, learning during play, what adults should know about play</td>
<td>Questions: defining play, play preferences, perceptions of science, play partners, learning during play, what adults should know about play</td>
<td>Questions: play partners, items willing to share/not share, rule for play, who taught the rules, meaning of being “nice”</td>
</tr>
</tbody>
</table>
Some things we have learned

The majority of children ages 4-10 are able to answer questions about play and learning.

Children identify parents and family members as primary play partners.

Children can articulate what they gain from play.

Children can provide us with important insights about their own experiences.
Reflections on Methodology

- IRB approved study: parent/guardian consent, child assent
- Team based approach for interviews
- The potential value of focus groups
- Potential limitations
Parents/Caregivers

Barriers to Play:
- Busy schedules
- Concerns about Safety
- Technology

Roles in supporting play:
+ observe, provide opportunities, take my child
- Play alongside, facilitate play, learn alongside

Children

Learning from play:
- How to play, motor skills, imagination, STEM, mastery, social emotional skills

What should adults know?
- Play is fun, Adults should have fun, adults should play with us
Early Dissemination

Rebecca Herz’s Museum Questions Blog
Play and Learning? What can Children Tell us?

NAEYC Blog
What’s Play All About? Children’s Museums Weigh In
Rivera & Tongsard
https://www.naeyc.org/resources/blog/whats-play-all-about-childrens-museums-weigh

Thank you to an amazing 2019 research team: John Chen, Yarely Reyes, Emily Miller, Iveth Prado, Daniel Wallace, Nayeli Montes, Emma Hoffnagle, & Isabella Ayala
Listening to Children
It all started with rubberized mulch.
What do children **like** to do?
What do children **want** to do?
What do children **need** to do?

**Watch, ask, listen.**
Groundwork
All exhibit development is informed by and flows from what we **value**: the creativity of children, innovative research, playful learning, kindness and respect, collaboration, and excellence.

Our **exhibit framework** is built of three pillars which remain consistent to ensure a unified result: our exhibit development process, look and feel, and visitor experience. Three threads weave through the pillars to ensure strength and alignment: our learning approach, commitment to diversity and inclusion, and love of literacy.

We **explore ideas** for new exhibits broadly, through all-staff meetings, front-end evaluation/visitor interviews, and an interdepartmental workshop to generate ideas.

Our ideas, flowing from our values and built on our exhibit framework, are filtered and consolidated into a **statement of intent** to ensure that all stakeholders agree on both the exhibit’s intended direction and which ideas to pilot before moving forward.

Before designing exhibits, we **pilot ideas** from the statement of intent with children to see how they answer our invitation to interact with a material or activity; their ideas and feedback expand our vision and are documented to inform exhibit design.

**Concept design** translates the best ideas from piloting into an experience description, floor plan, 3D sketches of exhibit elements, infrastructure and architectural requirements, fundraising renderings, and fabrication estimate.

**Final design** results in drawings and specifications sufficient to bid construction contracts and/or initiate in-house fabrication; designs may be **prototyped** to answer questions about exhibit operation or function; renderings and descriptions are used to advance **fundraising**.

Once bids are awarded, **construction drawings** are created by outside or in-house fabricators sufficient to build the exhibit elements.

**Fabrication** of exhibit elements occurs off the public floor as much as possible, to minimize the length of time the gallery is closed to the public for installation.

**Openings** include a soft opening to test, observe, and fix (if necessary) exhibit elements, a VIP/members preview, and a public opening.

Informed by post-opening evaluation, staff develops a plan for **exhibit improvement and maintenance**.
Renovation of the Grocery to the Market

GRASSHOPPER GROCERY & BUTTERFLY BISTRO
CONCEPT DESIGN - THE MARKET
Interdependence:
The dependence of two or more people or things on each other.

WE ARE ALL DESIGNERS!
INTERDEPENDENCE
Option #2

CONCEPT DESIGN - THE GARDEN
CONSTRUCTION - THE GARDEN
The Market was imagined, researched and designed in collaboration with the third graders of Opal School.
Redesign of Water Works into Drip City
Observations on Opal Playground
Observations in Water Works
Piloting of new materials in the existing exhibit
We want your feedback for River City!

This place rocks.
My favorite childhood memory involving water is...

Date: 2-21-2017

Age: 7
Online Member Surveys

When I think of water in Portland I think of...

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Natural Bodies of Water</td>
<td>62%</td>
</tr>
<tr>
<td>Outdoor Water Activities</td>
<td>24%</td>
</tr>
<tr>
<td>Industry &amp; Indoor Activities</td>
<td>22%</td>
</tr>
<tr>
<td>Local Activity</td>
<td>20%</td>
</tr>
<tr>
<td>Other</td>
<td>20%</td>
</tr>
<tr>
<td>Swimming &amp; Pools</td>
<td>18%</td>
</tr>
<tr>
<td>Fish, Animals, Etc.</td>
<td>16%</td>
</tr>
<tr>
<td>Drinking Water</td>
<td>13%</td>
</tr>
<tr>
<td>Fun</td>
<td>7%</td>
</tr>
</tbody>
</table>

Most responses referenced natural bodies of water (62%). However, almost half of responses referenced interacting with water in some capacity, be it indoor or outdoor. In some instances (20%), this activity was clearly local to Portland.

Sample: 45 responses
Summer Camp Projects
How is water used at home?
Exit Interviews
Expectations & Attraction to Water Works

There is a clear theme across general expectations and spatial attraction for getting wet and playing in water. While expectations are being met, a lesser number of respondents are definitively excited about the time spent there. In fact, concerns about exhibit access for little users was often mentioned as a reason for why expectations perhaps couldn't be met.

Sample: 80 responses
What we’ve learned
Centering Children’s Voices at Providence Children’s Museum

Janella Watson
Associate Director
PCM’s Creativity Initiative

A three-year multifaceted venture designed to build creative confidence in children.

Working in collaboration with the arts and design communities of Rhode Island, the Creativity Initiative will present immersive, design-rich exhibits, educational programs and maker workshops, both in the Museum and in settings across the state.
Summer of Prototyping

- Six weeks of intensive, rapid prototyping
- 100 little experiments
- Invitation across every department, role and function
- Facilitation training and practice for Experience Coordinators, AmeriCorps Members, Researchers, and Volunteer Play Guides
Summer of Prototyping

• Developing new approaches to collaboration between Exhibits, Education, Research, and Visitor Experience

• Practicing new methods of research, evaluation, documentation, and reflection

• Building new social media presence and developing new institutional voice
Museum Researcher

- Developed research and evaluation plans
- Observation tool
- Running Records
- Talkback boards
- Surveys with adults and interviews with kids
- Staff and Volunteer Documentation Wall
- Weekly Facilitation Practices Debrief
Research on Kids’ Creativity

- Study investigated 5- to 10-year-olds (N=75) developing understanding of creativity.

- In semi-structured interviews, we asked children to define the word “creative” and to provide instances of their own and others’ creativity.

- We then asked them why these instances were creative.

- Older children produced more mental state definitions of creativity and talked about novelty more than younger children.

- Children who talked about novelty in their definitions were more likely to include novelty in their justification for why their example was creative.

- Their examples of creativity fell into arts, building, game play and academic categories, but academics were rarely discussed.
Evaluation Summary

Prototyping spaces were used most by children aged 3-11

Promoted multi-age and multi-generational experiences

More physical accommodations are needed for younger participants, ages 1-4

Most types of play witnessed in Prototyping Gallery were creative/constructive play and exploratory play

Activities/exhibits encouraged prolonged engagement
Thank You!

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Associate Director
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Methods, ethics, and transparency when gathering children’s input

Suzy Letourneau

New York Hall of Science

ACM 2019
**Methods: What information can you gather?**

<table>
<thead>
<tr>
<th>Method</th>
<th>Use for</th>
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<tbody>
<tr>
<td>Observations</td>
<td>Documenting reactions, interactions, and usability without interrupting</td>
</tr>
<tr>
<td>Interviews</td>
<td>Understanding perceptions, attitudes, preferences, prior experiences</td>
</tr>
<tr>
<td>Focus groups</td>
<td>Getting feedback in a social setting (among peers, families)</td>
</tr>
<tr>
<td>Sticker voting, card sorting</td>
<td>Closed-ended; Documenting preferences or perceptions anonymously</td>
</tr>
<tr>
<td>Audio, video, photos</td>
<td>Capturing details of conversations or interactions in the moment</td>
</tr>
<tr>
<td>Drawing, Art, Journals</td>
<td>Open-ended and flexible; capturing perceptions, knowledge, salience</td>
</tr>
</tbody>
</table>

**Resource:** NSF User-Friendly Guide to Project Evaluation  
Tips

- **Observations:**
  - Don’t try to observe everything at once. Focus on answering a driving question.
  - Focus on what you see/hear, not your interpretation: What captures children’s attention? What materials do children use, and how? What emotions do they express?

- **Interviews:**
  - Start with low-pressure questions (“Which thing did you like the best?”) and shift to open-ended prompts (“Tell me more about what you were playing.”)
  - Use physical objects to ground the conversation (prototypes, drawings, photos), or your observations (“I noticed you...”).
  - Ask for negative feedback as well as positive (“What was the most interesting part? What was the hardest part?”)
Ethics: What information *should* you gather?

- **Select methods carefully to respect families’ time and space.**
  - What question are you trying to answer?
  - What information do you really *need*?
  - What information would you (or children you know) be willing to share?

- **Tips:**
  - Only gather information you intend to use.
  - Choose the least intrusive methods possible.
  - "Need to know” or “nice to know”?
What information should museums share with visitors?

- Families need to plan their visits and may be concerned about privacy.
- Families have a right to know:
  - What information you’re gathering and why
  - How much time or effort is required to participate
  - How the information/images you’re collecting will be used, and who will have access
  - How to opt out of participating if they choose

Resources: CAISE blog series on navigating IRBs and informed consent:
http://informalscience.org/sites/default/files/IRBSeries_0.pdf
JME article on ethical guidelines for museum evaluation:
How can giving input add to the visitor experience?

- Is it fun for children/families to share their ideas or feedback?
- Do they have an opportunity to see the finished product, how their input was used, or how it made a difference?
- Can children/families learn about the museum’s creative process by participating?
- Can they learn something about themselves (or for caregivers, about their children)?
Thank you!

Contact: sletourneau@nysci.org
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• What do you intend to try now, at your own institution?
• What other questions do you have?

Resource List: https://tinyurl.com/y2nh9tdk