EXHIBITIONS AND COSTUMES AT THE NATURE MUSEUM

Costumes: Tried and True or Full of Surprises?

COSTUMES + EXHIBITS

What can we do to make the experiences more than dress up?

Artist or Scientist: Costumes as a content tool

Valerie Grabski
Susan Foutz
Anne Fullenkamp
Kaleen Tison Povis, PhD
EXHIBITIONS AND COSTUMES
AT THE NATURE MUSEUM
MAY 18, 2018
PRESENTED BY VALERIE GRABSKI
EXHIBIT EVALUATOR AT PNNM (CONTRACT)
Why do you include costumes in exhibits?

More play? Because you should? It engages children? They look pretty cute? There’s that open space that something needs to go in? It supports learning goals of the exhibition? We need another interactive element? They seem to increased stay time? It worked well before? It makes sense to have something to go with this interactive?
Hands on Habitat & the Secret of Bees…

Children wearing Beaver Costumes in Hands on Habitat.

Children in The Secret of Bees dressed as Beekeeper & Bees.
Average Time Spent in Secret of Bees

19:41
Visitors Who Engaged with Costumes

11:54
All Visitors
Weather to Climate

Climate Lab/Green Screen in Weather to Climate.
Frogs… A Chorus of Color

A small frog looking at even smaller frogs.

The Zip Line
Visitors’ Costume Choices

3 visitors wore only 1 costume piece.

1 visitor wore 2 costume pieces.

1 visitor wore 3 costume pieces.

6 visitors wore all 4 costume pieces.

9 visitors engaged with the costumes but did not wear them.

11 of the 20 observed visitors wore at least 1 piece of the Frog Costumes. The Body and the Hands being the most frequently used parts of the costumes.

The Feet were only worn by the 6 visitors wearing all 4 pieces of the costume.
Backyard Adventures

Tennis balls rolled everywhere. Golf balls went for amazing journeys, but the costumes always ended up back where they belonged.
Costume Design:

• Is the costume unique?
• How accessible is the costume?
• Things on feet? What about pairs?
• What about that shy kid who wants to participate?

Exhibit Design:

• Where do the costumes go?
• Is the exhibition designed to foster pretend play?
• What activities do you want people to do in costume?
• How warm is the exhibition space?
Costumes: Tried and True or Full of Surprises?

Susan Foutz
Director of Research & Evaluation
InterActivity 2018
Costumes and props included:

- Dresses
- Capes
- Armor
- Shields
- Hats
- Vests
- Crocodiles!
Research questions:

• To what extent are visitors using costumes in role play activities in the four spaces of Pirates and Princesses?
• To what extent is pretend play happening with and without costumes?
• Do costumes appear to influence the nature of the pretend play?
• To what extent are adults using costumes?
Data included:
• Which exhibit area
• Number of adults and children
• In costume or not
• Tally of behaviors indicative of pretend play
Findings

At any given moment, about 20% of visitors in the gallery were in *costume*...
Findings

At any given moment, about 20% of visitors in the gallery were in **costume**, but only 1% were **adults**.
At any given moment, about 20% of visitors in the gallery were in costume, but only 1% were adults.

Costumes ≠ pretend play = pretend play

Adults participated in and facilitated pretend play, even though they rarely wore costumes themselves.
Research questions:
• Who initiates costume-wearing—adults or children?
• What percentage of visitors wear costumes primarily for photo-ops versus doing activities in the exhibit or pretending?
• Are adults more likely to use a prop than a full costume?
Findings

Child initiated wearing

60%

20-25% of children pretended while in costume

Almost all children who pretended in costume initiated its wearing

Very few adults wore costumes or used props (again!)
Other than pretending while wearing a costume, visitors also:

- Took photos of family members in costume
- Did exhibit activities
- Other behaviors we didn’t predict!?!
COSTUMES + EXHIBITS

What can we do to make the experiences more than dress up?

Anne Fullenkamp, Director of Design
Children’s Museum of Pittsburgh
ACM Interactivity 2018
WHO ARE THEY FOR?

- **KIDS** – children are familiar with dress-up as a part of play experiences.
- **GROWNUPS** – adults are comfortable with kids participating.
- **DEVELOPERS** – easy way to extend the storytelling.
- **BUSY EXHIBIT STAFF** – easy way to fill space at a relative low cost.
Andy Warhol: Myth/Maker
Costumes are the characters represented in the *Myths Series* that are in the exhibit.

Daniel Tiger’s Neighborhood
Costumes are from the stories depicted in the television series.
Very Eric Carle
One universal costume that is relevant to all of the experiences and for all of the visitors.

The Pigeon Comes to...
One costume type that is the marquee storyline for the exhibit.
WHY ARE THEY THERE?

- Convey a specific story or experience.
- Inspire open-ended, imaginative play.
- Provide new, unexpected experiences for kids and grownups.
- Photo-Op.
Costumes that appeal to grownups and kids make for more engaging museum experiences.
Public performance and being on stage are natural extensions of costume experiences.
WHAT ARE THEY DOING?

- Tools for a specific story or experience.
- Tools for open-ended, imaginative play.
- Fulfilling expectations.
- Advance a broader narrative or learning goal.
If the exhibit has a strong narrative, visitors will appreciate finding their favorite characters.
Costumes can be the jumping off point for extended imaginative play beyond the core story.
HOW TO DO IT?

- Less is sometimes more.
- Costumes don’t have to be clothes.
- Provide costumes for everyone.
- Be intentional in the presentation.
THANK YOU
Artist or Scientist: Costumes as a content tool

Kleen Tison Povis, PhD

UPCLOSE
University of Pittsburgh
Center for Learning in
Out of School Environments

children's museum
PITTSBURGH
Research Context & Questions

Do families adopt a suggested frame?
Does framing affect noticing & behavior?
How does framing influence conversational content?
Artist or Scientist
Methods

- Audio Recording
- Child Artifacts
- Parent Survey

- behavior and conversation
- frame adoption
- sample
## Select Demographics

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number Dyads</th>
<th>Child Avg. Age (in months)</th>
<th>Child Gender</th>
<th>Adult College Graduate</th>
<th>Family Museum Member</th>
<th>Adult Reported Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientist</td>
<td>14</td>
<td>74.64 (10.03 SD)</td>
<td>6 girls</td>
<td>12 (yes)</td>
<td>13 (yes)</td>
<td>12 Caucasian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 boys</td>
<td>2 (no)</td>
<td>1 (no)</td>
<td>2 non-Caucasian</td>
</tr>
<tr>
<td>Artists</td>
<td>14</td>
<td>68.43 (11.89 SD)</td>
<td>5 girls</td>
<td>12 (yes)</td>
<td>11 (yes)</td>
<td>11 Caucasian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 boys</td>
<td>2 (no)</td>
<td>3 (no)</td>
<td>3 non-Caucasian</td>
</tr>
<tr>
<td>Control</td>
<td>10</td>
<td>72.70 (13.56 SD)</td>
<td>6 girls</td>
<td>9 (yes)</td>
<td>9 (yes)</td>
<td>9 Caucasian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 boys</td>
<td>1 (no)</td>
<td>1 (no)</td>
<td>1 non-Caucasian</td>
</tr>
<tr>
<td>Totals</td>
<td>38</td>
<td>71.84 (11.72 SD)</td>
<td>20 girls</td>
<td>33 (yes)</td>
<td>33 (yes)</td>
<td>32 Caucasian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18 boys</td>
<td>5 (no)</td>
<td>5 (no)</td>
<td>6 non-Caucasian</td>
</tr>
</tbody>
</table>

- Generalizes to typical museum going population
- No significant interest differences between groups
Thematic Analysis: Spider Web

Form & Function Conversation

30% of scientist condition
0% artist or control condition
A: This is cool because it’s like a spider web but this is like the weaves Daddy makes on his bracelets.
C: Cool
A: Right?
C: Let’s make a web! Start spinning the web! What will our web be like?
A: I don’t know. What do you think a web should look like?
C: I don’t know.
A: Hm...
C: I never made a web before.
A: No, but have you seen a web?
C: Yep!
A: Mhm.
C: Lots of times actually!
A: You think Charlotte must have had a hard time spelling all the words? That would be tricky. It’s hard- It’s hard just to make a normal web.
C: From Charlotte’s web?
A: Mm-hmm.
Parent Responses

What do you feel your child learned in the Eric Carle Exhibit today?

- neither art nor science
- art learning
- science learning
C: That’s what I discovered as a scientist!
A: Yes!
C: I’ll write that down. I’ll draw that down.
A: Okay! So what did you observe?
C: I observed that it goes the same thing that on the screen.
“Artist” or “Scientist”: Mention & Meaning

“I’m an artist; I’m going to draw”

“Alright scientist, anything else we need to document?”
Thematic Analysis

Eric Carle

Mention
Scientist 71%
Artist 79%
Control 60%

Artist talk
Scientist 21%
Artist 64%
Control 40%

Art process talk
Scientist 0%
Artist 29%
Control 10%
* 43% of scientist families said the word “color” which is significantly less than the artist (93%) and control families (90%), p<.01.
“How do you mix to make brown?”
* Scientists attended to studio less, $p < .05$
* Scientists engage in studio art making less, $p < .01$
**Time Spent**

*Artist condition (M≈7min) and control condition (M≈ 7min) spent significantly more time in the exhibit art studio than the scientist groups (M≈ 90 seconds), p < .05*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Total Exhibition Avg. Time (s)</th>
<th>Art Studio Avg. Time Spent (s)</th>
<th>Time spent in Studio (%)</th>
<th>Outside Studio Avg. time spent (s)</th>
<th>Time spent outside studio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientist</td>
<td>1340.86 (601.54 SD)</td>
<td>93.286 (164.11 SD)</td>
<td>7.00 (12.99 SD)</td>
<td>1247.57 (619.12 SD)</td>
<td>93.00 (12.99 SD)</td>
</tr>
<tr>
<td>Artist</td>
<td>1789.86 (780.43 SD)</td>
<td>422.21 (356.90 SD)</td>
<td>23.21 (20.98 SD)</td>
<td>1367.64 (662.99 SD)</td>
<td>76.79 (20.98)</td>
</tr>
<tr>
<td>Control</td>
<td>1292.60 (821.88 SD)</td>
<td>436.40 (512.41 SD)</td>
<td>25.90 (20.09 SD)</td>
<td>856.20 (381.51 SD)</td>
<td>74.10 (20.09)</td>
</tr>
<tr>
<td>Totals</td>
<td>1493.58 (747.26 SD)</td>
<td>304.76 (380.67 SD)</td>
<td>17.95 (19.62 SD)</td>
<td>1188.82 (606.49 SD)</td>
<td>82.05 (19.62 SD)</td>
</tr>
</tbody>
</table>

*Costume conditions spent significantly more time (Science, M≈ 20min; Art, M≈ 23min) outside the art studio than the control condition (M≈ 14min), p < .05*
Learning Talk

Personal connections (including books)

Cross-exhibit comparisons

Explanatory talk

• Bringing in prior knowledge
• Stating or asking about relations, behaviors, functions.

* Science Talk – science process, techniques, information
* Art Talk – art process, techniques, information

* More explanatory talk in costumes than control, p<.05
Explanatory Talk Means

“Science Talk”

“Art Talk”
Explanatory Talk Explanation?

Costume conditions → science → art → Scientist Condition
Summary: Costumes Direct the Action

Frame Adoption

Attention and Behavioral Practices

Learning Conversations
Principles to Practice Session Summary

Costumes: "Wear," When, & Why?

Principles to Practice Session Summary
- Costumes can inspire, open-ended, imaginative play...even in exhibits not originally designed for such.
  [BUT] Including costumes in an exhibition does not automatically lead to pretend play.
  [AND] Adults and children engage in pretend play with and without costumes.
  ▪ Pretend play was more closely linked to the environment and the child's motivations (CMJ).
- Intentional costumes can help to support intended visitor behaviors.
  [THEREFORE] Think about what a costume does rather than what it is.
  [FOR EXAMPLE] Costumes can affect behavior, such as where families dwell in an exhibit.
  ▪ Visitors using costumes had a longer dwell time in a pretend play exhibit (PNNM).
- Costumes can change perception, providing a new frame or approach to an exhibit.
  [EVEN] Conversational content can be influenced by costumes.
  [WHICH MEANS] Learning goals can be supported by costumes.
  ▪ Participants' reported learning aligned with costume condition (CMF).
- Costumes can provide new, unexpected experiences for kids...and grown-ups.
  [REMEMBER] Visitors are full of surprises!
  [SO WHILE] Costumes can be used to convey a specific story or experience.
  [ALSO] Be prepared to learn from them and have your assumptions challenged!

Practical Tips
- Consider including a photo op (and link it to your social media).
- Costumes don't have to be clothes (and this might be a good place to start).
- Provide costumes for everyone (of all ages, abilities, and backgrounds).
- Be intentional in the presentation (and think about how that invites engagement).

Less is sometimes more!

Exhibit Design, Costumes, and Pretend Play Matrix

Other Factors to Consider

Valerie Grabski, Chicago Academy of Sciences/Peggy Notebaert Nature Museum
Kaleen Tison Povis, PhD
Susan Fouts, The Children's Museum of Indianapolis
Anne Fullenkamp, Children's Museum of Pittsburgh