Designing Exhibits for Kids: What Are We Thinking?

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As we focus on designing interactive exhibits for families, there seems to be pretty broad agreement that engaging people in play, and thinking about family dynamics in museums will get us to exhibit design heaven: we'll attract, hold, and communicate to people. And while it's true that being playful seems to work better than some approaches, I'm here with some pretty bad news: it's probably not working nearly as well as you think it is. I'm going to suggest why that is, and I'm also going to suggest how we can make it work better.

Let's start with how we might typically approach a new exhibition. We define the basic concept and articulate a few goals, we conduct research and come up with the basic content of the exhibit. From there, we think about the best media to convey that content, always looking for ways to vary the media so people won't fall asleep or feel like they're reading a book on the walls. We pay attention to the structure of the experience and think about pacing, whether we're developing a series of "chapters" or "chunks" of the story to make it easier to take it all in. And finally, we layer the experience for different audiences – what are sometimes described as the strollers, browsers, streakers, etc.

When we're being really clever, we think about the audience and consider their level of previous knowledge on the one hand, or what Minda Borun described as "naïve notions" on the other -- ideas that might not be correct, objectively speaking, but nevertheless are the frame through which people take in and organize information. We might think about how to engage personal connections to the material, and even what we can do to cater to different learning styles following the work of Howard Gardner – some people are more visual, some really respond to music and audio cues, some people have a very strong spatial sense and learn a lot through tactile experiences. In recent years, there's been a related discussion about people "making meaning" in exhibits and now we spend a lot of time talking about a constructivist approach and the ascendancy of the individual point of view. But still, we're working with a content driven approach and we're using information about our audience to make the transmission of that content more effective.

As good as we are, we may still be making a fundamental mistake. Basically, we're assuming that children are a shorter version of adults – a bit more self centered perhaps, maybe a smaller reservoir of experience, they don't read as much, and they need to move around a bit more. And that is a completely inadequate way of thinking about kids' brains. The paradox is that although we all used to *be* kids, none of us really remembers what it was like – what we thought about, how we understood motivation, social interaction, even things like cause and effect. We're designing engaging exhibits and presumably communicating something, but what? To answer this, we need to understand that a kid's reality is fundamentally different from our reality. Their brains are still developing and throughout childhood they have a series of unique ways of making sense of things – ways that developmental psychologists have been describing for years. This is

true of scientific understandings, of cultural knowledge, and things as basic as the passing of time – the meaning of history.

Here's a short story about why I know we're in trouble:
I have a good friend who was born in 1950 and a few years ago, he noticed that his 14 yr. old son was doing a lot of other things while doing homework and he got concerned about this. His son was working on a computer, on-line, and was sending messages to his girlfriend, helping friends out with homework, etc. etc. So my friend, who graduated from college in about 1970, asked him, "do you really think it's such a good idea that you're talking to all these people while you're doing your homework?" And his son, a very thoughtful young man, responded, "Dad," (saying it as only scornful teenagers can) "you need to understand that IM is to my generation, what Email was to yours." And if you don't get the joke, you're probably under 35. It's as if the Civil War, the Great Depression, butter churns, and dinosaurs all exist in one huge compressed category of "the past."

So, how can we as museum planners and educators respond to this situation? First, we need to get beyond the idea of "naïve notions," which presupposes that in most ways, our brains are all pretty much the same – we just have a few specific content areas that are a bit eccentric in their organization. We need to adjust our communication and experiential goals to make them appropriate for our audiences – and let me be really clear about this – I am not talking about "dumbing it down." And we need to anticipate the dynamics in family audiences – primarily by giving adults explicit roles that still leave room for kids to follow their instincts, take control, and indulge their sense of curiosity.

What does our experience at Boston Children's Museum tell us about this challenge? One example is the *Art Studio* where it's all about giving kids an opportunity to explore different media with lots of supportive direction from trained staff. The studio is an enclosed space that seats about 20 children with their adult companions. There are always lots of materials laid out for one specific activity and these change every month – there are also special activities for festivals. And there's a separate table, with less involved materials designed for kids up to about 3 years old in case they come in with an older sibling. During the week the *Studio* functions as a drop in area – on the weekends we have half hour studio sessions and we control the number of visitors. There's a real emphasis on letting kids do their own work – we set up a question, give some suggestions, and encourage them to explore. Key elements are choice, control, and completion and of course you get to take home the work you've done.

The Studio has a real following, especially among our members. It's a great place for kids to build confidence not just in their artistic ability, but in their ability to make good choices. The staff people are trained to discourage parents from butting in and doing the projects. They'll say things like, "it sounds like Mom wants to make a crayon resist drawing too!" which lets both parties know that it's up to the child to guide his or her own activity.

This is all about creating what Milde Waterfall and Sarah Grusin call "the confident me" in their book, *Where's the Me in Museum*. It's about giving kids a voice and a way to express it.

Now of course that's a fairly open-ended example and a lot of the exhibits we're talking about during these meetings have far more specific content goals. So what do we do about that? If we look at our approach to a couple of exhibits about culture, some patterns and tendencies emerge that address the challenge of transmitting ideas with a particular audience in mind.

Of course culture, history, and the arts are not the same; they require different conceptual frameworks for creating effective exhibits. But if you bear with me, I'm going to take the notion that "the past is a foreign country" quite literally and suggest that the technique we use for talking about culture might have some relevance for exhibits about history and perhaps for the arts as well. To oversimplify for a moment, I believe that history – a different moment in this same place – is even more challenging for children to understand than the idea of culture – what people are like in the same moment, but a different place. But it's possible that by thinking carefully about how *children* conceptualize notions of history, culture, and art, we might be able to design more engaging and more accessible museum experiences.

I'm going to use one recent exhibit produced at the Boston Children's Museum, *Five Friends from Japan*, to talk about how we formulate appropriate messages, how we connect to engaging media, and how we measure results. The point of this exhibit was to expand the understanding of Japan and Japanese culture for our audience. And in order to develop more specific educational and experiential goals, we started by thinking about the identity of our audience.

The Boston Children's Museum welcomes about 420,000 visitors each year and one of the most basic ways to describe them would be to say that 47% are adults, 15% are kids age 6–15, 28% are kids age 2–5, and 10% are kids under 1 year old. Given that half our visitors are adults, we think quite a bit about family learning and engaging adults. After all, they generally decide the day's itinerary – we want them to have a good experience too.

We begin by thinking carefully about the dynamics in families, what we now call "family learning," and this molds our approach to exhibits. In addition, we depend on two other important tools: developmental models and evaluation. We'll return to exhibit evaluation in a moment and begin by considering how models of child development can be useful. Developmental models are the ways in which scientists describe the basic structures of our thought processes at different ages – how we think about things, go about solving problems, and explain the world to ourselves and to others. The starting point for this discussion often leads us to the work of Jean Piaget.

It's generally accepted that cognitive development is a process that proceeds along a continuum, and at any given moment you can find behaviors and patterns of thought from more than one developmental stage in evidence. But for our work, the most important realization is that children are growing and changing and at some fairly predictable intervals, you really start to notice that they're just thinking about things differently. As you move from the pre-operational period of 2–7 year olds through concrete operations (7–11 year olds) and then on to formal operations (11–15 year olds) you're basically seeing, "an increasing independence of action from its immediate environment" (Phillips, 1981). One conclusion we might draw from this is that the

ability to think about abstractions increases with age. After age 7, kids become much more rational and objective, but only with real things and people – things they can actually see. It's when children reach adolescence and the formal operations period that they can process more abstract ideas. And what I'm suggesting is that if their brains are literally not capable of grasping certain concepts, then using play to convey those concepts really isn't going to help. You need to start with ideas that kids have a reasonable chance of understanding, and take it from there.

So, how does this all relate to exhibits about culture for a family audience? About two years ago the Boston Children's Museum convened an internal study group and we considered information from a variety of sources about children's understanding of cultural differences and identity. Based on this work, we now develop content goals for exhibits bearing in mind that children aged 4–6 are just beginning to develop their own ethnic identity and they have an interest in how and why people do things. They are able to elaborate on group differences and, curiously enough, they believe they can change their ethnic identity – sometimes by changing their clothes. They begin to self identify as a group member, and they have clear feelings towards different groups.

Older children are beginning to form an idea of culture and they compare their own culture to others. They see ethnicity as a constant and they can categorize and label minorities. They recognize in-group differences and where appropriate, they are able to describe themselves as having dual nationality.

Knowing all this, we created developmental frameworks for our exhibit about Japan and it really had a profound impact on the formulation of exhibit messages. For each of the main ideas, there were different forms of the message directed at different age groups.
Our main messages for the exhibit were:
- In the U.S. and Japan some things are the same and some things are different;
- There's diversity among children and families in Japan, and
- Tradition is important in Japan, and so is modern international pop culture.

The visitor experience begins in a typical Japanese elementary classroom. This is the starting point for an exploration of Japan that includes "home visits" to five different Japanese children. Visitors may choose to enter a series of rooms that represent parts of five individual households, each one full of furnishings, activities, and media that illustrate different aspects of the young subject's life. We were counting on the curiosity and sociability of our audience to explore the lives of the exhibit subjects and to use that information to develop conclusions about what life is like in Japan.

We also wanted to confront people's pre-existing notions or stereotypes of Japanese culture – what Borun might have called the "naïve notions," so we surveyed adults and children in our museum and came up with a few consistent impressions that we thought were not really accurate:
- Japanese food = Sushi
- All Japanese kids are smart and work hard in school

- Traditional clothing, sports, and architecture rule

The main exhibit messages and the stereotypes we wanted to overturn both informed the exhibit development process. We thought about the different ages of our audience and developed lots of hands-on opportunities for our visitors – you can open up kids' desks in the classroom and see what they've got stashed in there, you can role play at serving lunch to your classmates the way they do in Japan, and help clean the classroom. We provided clothes to try on and dresser drawers to investigate, an interactive keyboard that features Japanese Rap and Pop groups as well as classical Western music and traditional Japanese music. We created a number of opportunities for our primarily American audience to connect with the Japanese subjects of the exhibit by giving them comics, bugs, stickers, music, sports, and baseball – things we knew they had in common. Actually this was one of three exhibits that we produced in 2004 with a baseball connection. They all opened *before* the Red Sox won the World Series!

To confront stereotypes, we built a tofu shop where you see about 20 different kinds of tofu-based dishes – and there's no sushi to be found. One of our exhibit subjects is a "jock" who complains that he hates school and his mom gets upset because he does so badly; another subject is a "clothes horse" who loves fashion and has lots of *Hello Kitty* paraphernalia but only one traditional kimono in her closet.

We used evaluation throughout the process of exhibit development and production and the results of the summative evaluation were quite gratifying. We found that:
- 89% of children were able to identify one of the five exhibit subjects as someone with whom they'd like to be friends. They said things like, "Ken is my favorite; I like baseball and Harry Potter too!" Or, "I liked Sakiko; she is a lot like me in some ways, but different too."
- 50% listed shared interests or personal qualities as the reason for their choice;
- 66% of children saw the Japanese children as being very different from each other. On the other hand, we were fascinated to find that only 50% of adults described the Japanese children as very different from each other – it's possible that the personalities and interests of the exhibit subjects may have been more in tune with those of American *children,* accounting for this discrepancy;
- Children were able to describe many similarities and differences between the U.S. and Japan. Such similarities and differences were typically factual observations based on the exhibition. Most personal characteristics ascribed to Japanese children were positive and non-stereotypical.

Quoting from the evaluation, "the words and phrases used by children tended to be very positive and not include stereotypes that older visitors might use. Happy, friendly, cool and creative were much more commonly cited than smart, polite, and hard-working."

- Adults who had visited the exhibition were more likely to see Japanese children as "modern" vs. traditional, compared to adults who had not yet seen the exhibit.

I find the discussion of the "*words and phrases* used by children" in this evaluation to be particularly intriguing – I think it's incredibly significant and I'm going to come back to it in just a moment.

As we can see, *Five Friends from Japan* had fairly specific content goals. This was true of another exhibit that opened recently at the Boston Children's Museum, *Boston Black: A City Connects.* Here, the messages were:
*   Black Boston consists of culturally diverse communities;
*   The history of Blacks in Boston goes way back and is very significant;
*   We should foster a dialogue about race and identity.

The exhibit is designed as a series of neighborhood places that would be familiar to kids and each one is associated with a different part of Boston's Black community: a garage where a Haitian family is preparing a float for Carnival, a Dominican market, a Cape Verdean café, an African American barbershop and beauty parlor, etc.

Quite apart from its overarching message of diversity *within* the Black community, one of the really interesting things about *Boston Black* is that it gives children permission to ask questions. People often feel awkward or uncomfortable talking about race and identity and one of our principal experiential goals was to create an environment in which this would be okay – even encouraged. In the African Queen Beauty Salon, you can touch and braid hair – we expected this would be extremely popular based on exhibit prototyping. And we created a humorous display case nearby with pairs of "Barbie dolls" – one is always white and asking these painfully obvious questions like "How long does it take to braid it?" "How often do you wash it?" and the other is a doll of color – they come in a wonderful range of hues – giving very straightforward answers. The idea here is to enable a dialogue that will come naturally to children and to create a respectful and safe environment in which to explore race and identity.

This paper began with a promise to suggest ways to make exhibits for families more effective and better suited to their audience and the discussion leads to one strong recommendation: engage in an ethnography of childhood. The developmental models can only get us so far. We really need to do the things that anthropologists do: participant observation (hang out with kids and do what they do), interviews on kinship and social networks (find out about the significance of parents, siblings, friends, teachers, etc), data gathering, and careful listening and interpretation. We really need to listen to the *words and phrases* that kids use to talk about their world in order to get a glimpse of that world. We need to understand the structure of meanings and significances, to see what's important and appreciate the delicate systems of information and explanation children use to make sense of their experience.

In his recent book, *Reclaiming Childhood*, William Crain suggests an approach: "Instead of asking, 'What do we want the child to know and be able to do?' we should ask, 'What capacities is the child spontaneously motivated to develop at his or her current stage?' Instead of thinking about our own goals, we should consider the children's interests and needs" (Crain, 2003). If we really value children, our goal should be to create comfortable and effective exhibits that cater to

children and their families; to do this, we need to create exhibit settings that make children the author of their own museum experience.

Selected Bibliography

Aboud, F. (1987). The Devlopment of Ethnic Self-Identification and Attitudes. In J.S. Phinney
      & M.J. Rotheram (Eds.), *Children's Ethnic Socialization: Pluralism and Development* (p.
      32-55). Newbury Park: Sage Publications.

Aboud, Frances (1988). *Children and Prejudice*. Basil Blackwell.

Association of Children's Museum Asian Exhibit Initiative (2003, October) *Overview of
      Developmental Frameworks*, 1-9.

Bison, J. (1997). *Celebrate! An Anti-Bias Guide to Enjoying Holidays in Early Childhood
      Programs.* St. Paul, MN: RedLeaf Press.

Coleman, H.L.K. & Karcher, M.J. (2003, May). Developmental Framework for Planning
      Cultural Exhibits for Children. Madison Children's Museum and Austin Children's
      Museum, 2-12.

Copple, C. (Ed) (2003). *A World of Difference: Readings on Teaching Young Children In A
      Diverse Society*. NAEYC.

Crain, William (2003). *Reclaiming Childhood*. New York: Henry Holt and Company LLC.

Derman Sparks, Louise, Carol Tanaka Higa, and Bill Sparks. *Children, Race and Racism: How
      Race Awareness Develops*. In "Bulletin."

Derman Sparks, Louise (1989). *The Anti-Bias Curriculum: Tools for Empowering Young
      Children*. Washington, DC: NAEYC.

Feldman, R.S. (1998). *Child Development*. Upper Saddle River: Prentice Hall.

Holmes, Robyn M. (1995). *How Young Children Perceive Race*. Thousand Oaks, CA: Sage
      Publications.

Katz, P.A. (1987). Developmental and Social Processes in Ethnic Attitudes and Self-
      Identification. In J.S. Phinney & M.J. Rotheram (Eds.), *Children's Ethnic Socialization:
      Pluralism and Development* (p. 92-99) Newbury Park: Sage Publications.

Phillips, John L., Jr. (1981). Piaget's Theory: A Primer. San Francisco: W. H. Freeman and
      Company.

Ramsey, P.G. (1995). Growing Up with the Contradictions of Race and Class. In C. Copple (Ed.)
      A World of Difference: Readings on Teaching Young Children in a Diverse Society.
      National Association for the Education of Young Children, Washington, DC. Reprinted
      from: *Young Children,* 50 (6): 18-22.

Ramsey, P.G. (1987). Young Children's Thinking About Ethnic Differences. In J.S. Phinney & M.J. Rotheram (Eds.) *Children's Ethnic Socialization: Pluralism and Development* (p. 56-72). Newbury Park: Sage Publications.

Reddy, Maureen T. (Ed.) (1996). *Everyday Acts Against Racism: Raising Children in a Multicultural World.* Seattle: Seal Press.

Vaughn, G.M. (1987). A Social Psychological Model of Ethnic Identity Development. In J.S. Phinney & M.J. Rotheram (Eds.), *Children's Ethnic Socialization: Pluralism and Development* (p. 73-91). Newbury Park: Sage Publications.

Waterfall, Milde and Sarah Grusin (1989). *Where's the Me in Museum: Going to Museums with Children.* Arlington, VA: Vandamere Press.