What we do and do not know about family learning in art museum interactive spaces: A literature Review

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Picture a mother and two children, a girl, age 8, and a boy, age 10, walking through the art museum on their way to a family interactive gallery. The mother momentarily stops to talk to a museum staff member and the children quietly wander over to look at a large contemporary sculpture nearby. Their behavior is quite proper and they appear to enjoy themselves, laughing, pointing, and even mimicking the gestures in the sculpture with their bodies. The mother notices the children have moved away from her and, a bit startled, she calls to them, saying, 'Oh no, this isn't your area of the museum, come, we are going there now' and the family moves quickly, passing, but not looking, at the art objects on their way to the family gallery.

Many American art museums have a dedicated interactive family gallery. Although the exact number of such spaces is not clear,[1] a 2008 web survey[2] of U.S. art museum educators found that of seventy-seven art museums, forty-six (60%) reported having an interactive family gallery. Of those spaces, thirty-seven (80%) were created since 1999, suggesting a growing trend in this area. One can predict that within a few years, these numbers are likely to increase even more as many art museums are in the process of creating such spaces.[3]

Despite the prevalence of interactive family galleries in art museums, little is known about who uses them, why and in what ways, and how families' experiences in these spaces connect to their larger museum experience and to their everyday lives. A handful of unpublished evaluation studies in this area hint at the rich potential of family galleries in art museums to contribute to family learning, however, they are not generalizable given their situational focus on one particular museum and its family experience. In fact, there is little research focused on families in art museums at all, despite the fact that more than 90% of art museums nationwide offer specialized programming for families.[4]

In order to address these issues and more fully understand how family galleries facilitate intergenerational learning and what forms that learning takes, educators from three art museums, the Frist Center for the Visual Arts, the High Museum of Art, and the Speed Art Museum, and researchers from Audience Focus and the Institute for Learning Innovation received funding from the Institute for Museum and Library Services (IMLS), an agency of the U.S. federal government, to conduct a comprehensive, systematic research project of family learning in interactive galleries across multiple art museums. This research (currently in its third and final year) seeks to explore the following questions:

- ☐ Who are the families who use interactive galleries in art museums, and why do these use these spaces?
- ☐ How do families situate their use of interactive galleries within the larger art museum experience?

- What is the value of interactive galleries in art museums for families?
- How does the value of interactive galleries in art museums intersect with and support a family's core values?

At the heart of our investigation is the notion of *connection*. When asked about the purpose of dedicated interactive galleries for families, art museum educators typically offer two   intentions: 1) to bring more families into the art museum; and 2) to help families feel comfortable in the art museum, and to thus 'launch' them into the permanent collections and exhibitions, both physically and cognitively. The degree to which these interactive galleries accomplish such aims is unclear. But one can imagine what success might look like. For example, a small study conducted in an art museum interactive gallery on the effect of that experience on school children found that children who had never been to the gallery found it valuable and memorable, even overshadowing their visit to the rest of the museum. However, children who had previously visited the interactive gallery still enjoyed their time in the space but their memory drawings of the visit were most often about their experiences in the permanent collection. We wondered, then, about the effect of time and repeat visits on the ways in which families connected the interactive experience. Our study explores how the interactive family gallery facilitates connections between families and the rest of the museum, between personal interests or experience and the museum experience, and between the museum experience and the larger family agenda. In short, our study explores who connects to these galleries, why, and in what ways.

At the outset of our study, we conducted a web survey of art museum educators and a comprehensive literature review on family learning in art museums, selecting published articles and books, as well as unpublished evaluation studies. The primary purpose of the literature review was to provide grounding for our assumptions about family learning in interactive art galleries as we created and tested frameworks. It also allowed us to see the gaps in the research. This article provides an overview of that literature search as it relates to what we do and do not know about the core questions of our research study. Much of what is known about family learning in museums, in general, comes from studies conducted in science centers and children's museums and there are some fine literature reviews of this topic in non-art museums that were quite informative.[5] Without these studies, our review would have been thin, indeed. While there is a growing body of studies conducted in art museums, very few studies are conducted in interactive family galleries within art museums.

Who are the families who use interactive galleries in art museums, and why do they use them?

This research question yielded the most information from the literature review and several sub-categories of information emerged including: how a family is defined; what separates families from other types of museums visitors; and what motivates families to visit the museum and/or interactive gallery.

Defining Family: Before exploring who these families are, we analyzed the literature for ways in which researchers and practitioners define the concept of family. What constitutes a family in contemporary society has become increasingly complex, with definitions of 'family' varying from study to study.[6] Within the last decade or two, however, many researchers and museum practitioners have expanded upon the older notion of the traditional nuclear family consisting of a mother, father, and two or three children, to include other forms of families, such as single-parent families, step-families, binuclear families, extended families (including grandparents, aunts, uncles, and so on), cohabitating couples, and same sex couples.[7] Falk and Dierking[8] have turned the responsibility of describing family over to the

What we do and do not know about family
learning in art museums interactive spaces
2
Adams, Luke, & Ancelet 2010
www.artmuseumfamilyspaces.org

research participants, saying that a family is made up of persons who define themselves as such. Because of this shift in thinking, some researchers and museum practitioners have started to refer to family groups as inter- generational, cross-generational, or multi-generational groups, thereby avoiding the traditional notion that a family consists only of immediate family members related by blood or marriage.[9] For the purposes of our study, we define families as multigenerational groups of 2 or more people with a child under the age of 12 years.

Differentiating Families from Other Types of Visitors: If family groups are no longer easily defined by blood-relation or living situation, what can researchers say about families that will distinguish them from non-family social groups or visitors who come to the museum alone? One key element is that families closely resemble and are sometimes described as 'communities of learning' or 'communities of practice.'[10] By defining families within these categories, researchers emphasize the importance of social interaction through which families learn, as well as a family's tendency to work towards the same goals. Family groups have been described as micro-communities, sharing values, beliefs, history, customs, language, vocabulary, understandings and assumptions.[11] As communities of learners, families work together to support learning and the transfer of information among its members.[12] This is not to say that all members within one family are homogeneous in their knowledge, personal experiences, or preferred learning styles. In fact, individual family members will likely bring a range of education, learning skills, and life experiences to a museum visit.[13] However, when a family group visits the museum together, they will function as a multi-generational, social learning group and typically attach great importance to social interaction.[14]

Motivations for Family Visitors: When families seek leisure-time destinations, a negotiation between group and individual needs drives the decision-making process about where to go and what to see and do. Researchers examining family behavior in museums find that adults and children can equally influence the decision to visit a museum.[15] In some instances, parents may respond to the wishes of their children; while in other cases they may act on their own wishes to visit the museum as well.[16]

Family visits to museums seem to fluctuate between planned and spontaneous visits. Kelley, et al.,[17] found that the nature of planned and spontaneous visits differ in that planned visits are centered around the desire to see a particular exhibition or to take guests, whereas unplanned visits happen when families just pass by, feel like seeing what is going on in the museum, or just feel like doing something different for the day. Sterry found that most families fall under the last-minute decision category.[18]

Each family arrives at the museum with a unique set of goals, motivations, and expectations for their museum visit on any given day. These desires, needs, and expectations have become known as the 'family agenda.' These agendas have been shown to directly influence what families do and how they act during their visit, as well as what benefits they take away.[19]

Perhaps because family groups are made up of individuals with needs and motivations, when asked as a group, families tend to express more than one motivation for visiting the museum. Many families say that they choose to visit museums because they anticipate that there will be fun and entertaining things for everyone in their group to see and do there.[20] In most instances, families say that they come to the museum to learn something new, to enjoy themselves, and to spend quality time together.[21] Much of the research suggests that family visitors go to museums for social interaction and learning, or to learn together.[22] Some researchers claim that for families, the motivations to learn, interact socially, and

enjoy themselves are so intricately intertwined, that they essentially make up one agenda and it is not a question of either-or.[23] Many studies have found that spending a few hours of quality time together is a primary motivation for families to visit a museum.[24] This quality time serves as a way for families to build and strengthen their relationships.[25] Because, museums are considered by many people to be learning institutions, many parents view a museum visit as an opportunity to expose their children to history, science, and the arts. Families often say that they visit museums for educational purposes and to learn something new.[26]

While social interaction, learning, and enjoyment are the most commonly cited motivations for visiting a museum, some studies found that family visitors see museum visiting as an important activity that should be repeated at different stages during a person's life.[27] In most cases, parents who visited museums when they were children now see museum-going as a rite of passage that their own children need to experience. Ellenbogen found that this notion of museum-going as a "life-cycle" event was an important motivator for museum visits during her ethnographic study of families in science museums. She says:

> *Life cycle and place are the only other agendas consistently revealed across families in the analysis of the interviews. Families with life cycle agenda see the museum visit as a repetitive activity that may be more or less important at different times in life.*
> *The life cycle motivation can be very personal…but it may also involve a sense of duty…as a rite of passage"[28]*

Beaumont and Sterry found a similar life cycle motivation among grandparents. As one grandparent expressed it, 'I used to come as a child and now I'm bringing my grandchild.'[29]

Some families see a visit to the museum as a stimulating and unique experience. These families come with the expectation of being surprised and having opportunities to do and see things that they cannot see or do any place else.[30] Other family visitors come to museums because of practical issues, such as the admission is free or reasonable, the museum is located close to home or easily accessed, there will not be heavy crowds at the museum, or the current weather makes an outside family activity impossible.[31] Some parents say that they take their families to museums because they feel comfortable and at ease. These families view the museum as safe places where they can allow their children to explore in a comfortable and non-threatening environment.[32] Finally, some visitors come to museums because of their perceived importance to the local community and culture.[33]

How do families use interactive galleries within art museums?

Most of the research related to this question was conducted in non-art museums and focused on the whole museum rather than dedicated interactive spaces within the museum. Since most of these museums were science centers or children's museums the whole museum tended to be interactive. The data from these studies does provide strong evidence related to the pattern of family visits, time spent in the museum, structure of the visit, negotiated decisions, social interaction, the role of family members in family learning, parent behavior, and interaction with museum staff and other visitors. The occasional study in an art museum usually supports many of the findings on families' use of interactive experiences in other types of museums.

Patterns of Visit: Once families make the decision to visit the museum, researchers find that they tend to follow predictable patterns and routines during their time at the museum. This pattern usually begins with a 3-10-minute orientation period, followed by 15-40 minutes of intensive exhibition viewing and an almost equal 20-45 minutes of exhibition 'cruising,' ending with a   3-10 minute leave-taking period.[34] Falk[35] found that families divide their attention between exhibits, the museum setting, and their own social group. He claims that the majority of the family's attention is focused on exhibit viewing, which, towards the beginning of the visit, is conducted in an orderly and concentrated manner and then becomes less systematic and more opportunistic as the visit progresses. Falk also found that family visitors' attention towards social interaction is less than what they exert towards exhibit viewing, but that the focus on social interactions tends to remain consistent throughout the visit. Diamond[36] found a slightly different pattern in terms of social and learning behaviors, noting that social interactions as well as learning behaviors among family museum visitors decline significantly as the visit lengthens. Diamond also found that 'aggressive' and 'stress' behaviors are most common during the latter part of the visit and that interactions with people not in the family, such as other visitors or museum staff, also occur more towards the end of a visit.

Time Spent: Although the length of time that families spend in the museum depends on a number of factors, a few studies looked at the average amount of time that families normally spend on museum visits. Diamond[37] found that the average family visit to a science museum lasts slightly over two hours. Sterry[38] found a similar pattern in art museums, noting that family groups visiting the Victoria and Albert Museum in the UK spent at least an average of an hour in the museum and over half of the families spent two hours or longer. Kelley et al., found that the average family visit lasted between 60-90 minutes.[39]

Structure of the Visit: Studies addressed how families make use of their time during a science museum visit. Diamond found that, on average, families spend about 80% of their time in science center exhibit areas, with the remaining time being split between the café, museum store, restrooms, or waiting areas.[40]

A few evaluation studies in art museum interactive family galleries tried to discover if the interactive gallery experience launched families into the permanent collections or exhibitions.[41] The findings were inconclusive and hinted that the connection to the rest of the museum was not necessarily direct. In contrast to science centers and children's museums where the majority of the main exhibition spaces are interactive, art museum studies suggest that families spend the majority of time on family-based events or programs, with less time spent exploring the galleries.[42] Half of the families interviewed during an evaluation of the Speed Art Museum's interactive family gallery, *Art Sparks*, said they planned to visit the permanent galleries before or after their visit to the family interactive gallery. This was less often the case for parents of younger children who tended to confine their museum visit to the interactive space because they felt their children would either be uninterested in the permanent galleries or not behave well.[43] Perhaps a reason that there is so little information in this area is that it is an under-researched field in general and what studies exist tend to be small evaluations, limited in scope and resources. Tracking where families go in the museum takes a great deal of time and is usually out of the scope of most evaluation projects.

Some research shows that families plan for an extended break in their museum visit. Ellenbogen[44] notes that this break usually occurs about half way through a museum visit and that families use this time to eat a packed lunch or sit at the café and/or engage in activities that might not be appropriate for

exhibition spaces, such as coloring, playing with toys, or 'playful wrestling.' Kelley et al., identified similar behaviors, noting that many parents take children outside the museum or into a play space so that they can let off steam. It is suggested that this type of visit behavior is both for the benefit of the children, who need to release energy, and for the parents, who need "time out from the demands of close supervision."[45]

Families also differ on how they move through the museum. Some families arrive and stay together throughout their visit, while others split up, view exhibitions independently, and then regroup periodically.[46] Dierking labelled families that arrive and stay together throughout their visit as 'guided' or 'collaborative learning families' and those families that tend to split up and only check back in occasionally with each other as 'independent learning families.'[47] Ash observed that family groups often split into dyads or triads and then rejoin later to 'share meaning.'[48] Ellenbogen also observed families splitting into smaller groups or singles, adding that this behavior is consistent with other research that shows museum visitors' preference for acquiring information before sharing it with other group members.[49] In a study of families in Australian museums, Kelly et al., identified three modes of family visitors: 'ambient,' or those families who simply want to enjoy their time in a stimulating environment, 'exploratory,' or families who visit in order to discover new things, and 'specifics,' or families who visit in order to pursue a specific interest or topic or to visit a particular exhibition or program.[50] The study notes that some families use only one mode, while others move between different modes throughout their visit. With so much to see and do in the museum, it is not surprising that families have been observed using hunting and gathering or foraging-style strategies as they move through the museum, using their interests and curiosity to determine where to stop and what to share with the group.[51]

Often, family group members use the interpretative devices available to them in museums, such as interpretive panels, object labels, gallery leaflets, and visual images to help them structure conversations and provide meaningful explanations and interpretations. A large body of research documents the degree to which families make use of these interpretive devices, especially information panels and object labels.[52] Some of these studies found that while families do read labels, it is relatively infrequent.[53] In a study of first time family visitors to the Cincinnati Art Museum, parents often requested additional interpretive information, feeling ill qualified to help their children make sense of what they are looking at. The Cincinnati Art Museum study of first-time families showed this, for example. Laetsch et al., found that parents in science museums only read exhibit instructions or look at graphics 'if all else fails.'[54] When label reading does occur, it is usually in the form of the adult reading the label aloud or silently and then interpreting that information for the child.[55]

Negotiated Decisions: As was the case with who decided to visit the museum in the first place, who drives the visit once in the museum varies. Some research points towards the child, other points to the adult, and some point to both adults and children sharing in the decision-making equally. Some studies find that parents tend to allow the child to follow his/her own interests and curiosity and to use the museum to explore and make discoveries.[56] Children, especially young children, also tend to be the driving force behind activities that are not directly associated with exhibit viewing, such as visiting the museum store, eating, or using the bathroom.[57] Other studies find that adults and children share the responsibility for negotiating the course of the visit and that in most instances, families try to do and see things that all members of the family will find enjoyable and interesting.[58]

Less research has been done on decision-making in terms of ending a visit to the museum. During her ethnographic research of families in science museums, Ellenbogen observed that leave-taking is most

What we do and do not know about family
learning in art museums interactive spaces
6
Adams, Luke, & Ancelet 2010
www.artmuseumfamilyspaces.org

often instigated by one of the children in the family and in particular, it is often the youngest child who asks to leave. She adds that parents also instigate leave-taking, but the social interplay that occurs when a parent initiates the departure versus when a child initiates, looks quite different. When one of the children asks to leave, there is generally some appeal such as, 'can we go now,' or 'I'm hungry,' or 'I'm tired.' Whereas, when a parent makes a decision to
leave 'there is no appeal of "can we go now," but instead a statement establishing the end of the activity.'[59]

Social Interaction: Families operate as a social unit and so, not surprisingly, they spend a majority of their time at the museum engaged in social interaction and conversation, sharing what they know and trying to learn more about each other and the world around them.[60] Many studies have shown that each family member benefits from interacting socially with the larger family group and that these social interactions; some researchers posit that this interaction results in learning while others maintain that it is a mechanism through which learning happens and conversations lead to increased learning.[61] Research suggests that social interactions between family members not only leads to increased cognitive understanding of exhibition-related concepts and themes, but also leads to the development of shared knowledge, memories, and family history, as well as to an increased understanding of each other.[62]

Research on family learning in museums, finds that certain types of verbal and non-verbal social interactions are commonly associated with learning.[63] The most commonly cited learning behaviors include: asking and answering questions, providing descriptions, offering explanations, directing and orienting, pointing, observing and modelling, pretending or role-playing, providing clues or making suggestions, creating and presenting work, and offering reinforcement.

Asking and answering questions is a type of social behavior that many researchers have observed among family groups in museums.[64] Both parents and children engage in the inquiry process, often asking questions about the exhibitions, programs, and each other, as well as posing guiding questions about where to go, what to see, and how to do something. Palmquist and Crowley found that parents visiting a science museum with 'expert children' often present questions that encourage 'knowledge rehearsal' and offer positive reinforcement for their children's 'knowledge performance.'[65] Family members try to enhance the family learning experience by providing descriptions, interpreting information, and offering explanations or hypotheses.[66] One study found that different tiers or 'learning levels' are embedded within these types of family conversations, which include 'identifying,' 'describing,' and 'interpreting and applying.'[67]

Data from several studies finds families engaging in conversations that link their current museum experience with their previous knowledge and experiences and that the family as a whole, or individuals in the group, will often find ways to talk about what they are seeing or doing in the museum in relation to prior experience such as school, other museum visits, television or movies, other family experiences.[68] Adults and children who have visited museums frequently in the past, often recount previous museum experiences with their family members. For example, in a study of grandparent-child family groups, Beaumont and Sterry found that children are 'eager to show their grandparents what they know from previous visit[s] to the museum.'[69] Parents and grandparents have also been observed engaged in similar behaviors, such as passing down stories of former experiences, nostalgia, and memories to children.[70]

Of course, not all conversations that families have in museums are directly related to learning. Research

suggests that families also engage in 'management talk,' or conversations about how to get around the museum, what to see and do once they get there, and how to behave.[71] Ellenbogen found that a majority of managing talk is aimed at halting inappropriate behavior, such as running in the galleries, speaking loudly or yelling, and touching objects and artwork.[72]

Roles of Family Members in Learning: Many studies looked at the different roles and responsibilities family members assume while engaged in learning conversations and behaviors during a museum visit.[73] Supporting this idea, Kropf found that teaching was a reciprocal activity that all family members engaged in, even though each family member might engage in such behaviors for different reasons and during different contexts.[74] Hilke also argued that while significant differences in parent/child behavior were identified, the similarities outweighed the differences.[75] Finally, in their study of families at the Children's Museum of Indianapolis, Dierking et al., found that all family members engaged somewhat equally with each other, noting that 'adults ask children questions; children ask adults questions, children interact with one another and adults do likewise.'[76]

However, not all studies have agreed that parents and children engage in teaching or learning behaviors equally. Some studies have found that parents are more actively involved in supporting or teaching roles, whereas other studies have found that children will take on more active teaching roles than parents if the child is considered an expert on a subject.[77] Palmquist and Crowley argue that the person who ends up providing the most information during a museum visit cannot be predetermined by the person's status in the family (parent or child, mother or father), but rather, the family group 'actively negotiates who will provide information depending on who is the most knowledgeable about a presented topic.'[78]

Parent Behavior: Kelly et al., found that parents differ in the level of guidance they extend to their children, noting that some parents have clear strategies for helping their children solve problems and understand exhibitions components, while other parents tend to let their children explore on their own and provide assistance only when the child asks questions.[79] In a study of family visitors in a hands-on science center, Brown went further to identify eight different types of parental behavior.[80] These types are described as: 1) Caretaker – parents who kept surveillance, but allowed children to explore freely; 2) Supporter – parents who provided support without interference; 3) Helper – parents who helped out only as much as required so that children could take over as much as possible; 4) Initiator – parents who initiate the activity and then pass it over to the children; 5) Assistant – parents who act as an extra pair of hands for children who take the lead; 6) Partner – parents who act as equal partners with children throughout an activity: 7) Leader – parents who lead activities throughout, only allowing minor contributions from the children; and 8) Demonstrator – parents who carry out the entire activity by themselves while children watch.

Interaction with Museum Staff & Other Visitors: Little research focuses on how families in museums interact with others outside of their group, such as museum staff and other visitors. However, studies that mention family interactions with museum staff, such as guides, docents, and educators, hint at the potentially powerful role such interactions can have in the family learning experience. When families are observed interacting with staff, families often mention the attractive aspect of having staff present in the exhibition halls.[81] When museum staff members are present to help answer questions, the time spent at an exhibit tends to increase by twenty-two minutes.[82] Other studies found that families desire personal contact with staff and appreciate their interactions with knowledgeable, helpful staff that can help them make sense of what they are seeing or doing and can provide suggestions about what they

should see and do.[83]

What is the value of interactive galleries in art museums for families?

> *Unlike in formal education, museums, archives and libraries will not be able to make judgments about how much their users have learnt or how much progress they have made. However, users themselves will be able to make judgments about their own learning. They will be able to articulate what they found out and if that was what they were looking for. They can say whether they were inspired or had an enjoyable time. Collecting evidence of learning outcomes in museums, archives and libraries therefore must involve asking users how they feel about their own learning.[84]*

While the advice given in the excerpt above may sound to us like an obvious statement, it was not too long ago that determining what visitors learned from the museum experience belonged solely to the museum and that learning was most frequently defined as cognitive in nature. Museum professionals felt that true learning occurred when visitors could recite the academic concepts or facts presented in the exhibition. Over the last fifteen years museum researchers increasingly support the idea that learning in museums needs to expand far beyond the traditional notion of learning as the acquisition of facts and skills to include a range of affective, perceptual, and social learning factors.[85] Some of this research is focused specifically on families but much of it includes families as part of the larger museum population. There are some studies related to art museums but very little focuses specifically on interactive family galleries within the art museum.

The following discussion synthesizes the various frameworks found within the literature and includes responses from the 2008 web survey of museum practitioners. The process of sorting all the ways in which visitors benefit or learn from the museum experience can be tricky, primarily because these outcomes are often quite interrelated. We chose to synthesize outcomes according to three main categories: a) relationship building; b) knowledge and skills; and c) attitudes and perceptions. Our rationale for this choice was two-fold. One, our preliminary interviews with families in our research study suggested that these outcome categories were most salient for parents visiting interactive galleries in art museums. Two, recent studies have documented the correlation between visitors' entry motivations and what they learn from the museum experience; it made sense to us that if the literature points to three primary motivations for visiting art museums, then the primary outcomes might be related to those motivations.[86]

<u>Learning from and about each other – Relationship Building</u>: Many families state that their motivation for visiting the museum is to do something together as a family. Consequently, it is not surprising that families frequently describe the value of the experience in terms of their social interaction. In general, families value museum experiences that allow them to interact with each other in meaningful ways. Parents often say that museum programs, events, and experiences geared towards families and children provide them with valuable opportunities to spend quality time with their children, develop shared memories, and strengthen family relationships.[87] A study of families at a children's museum found that all family members benefit by learning more about the personal interests and learning styles of individual members.[88] For example, a mother observing her pre-school child painting in the style of Monet commented that she did not realize that his small motor skills were so developed and that he could draw recognizable forms. Because families visit the museum as a group, they tend to value

experiences that will appeal to a wide variety of ages and learning experiences so that there is something for everyone and all family members can participate.[89] Similarly, grandparents highly value the time they spend with their grandchildren in the museum because they use that time to discover new information about each other and share stories that contribute to building the child's identity as a member of family group.[90] Evaluations of interactive spaces in art museums have similar findings. When asked, parents and caregivers say that they value opportunities for meaningful social experiences and that they use their time in the interactive galleries to build shared memories and develop meaningful relationships with each other.[91]

Since these spaces are mainly targeted towards intergenerational groups, it was not surprising practitioners raised the importance of social interaction and collaboration. Several practitioners from the 2008 web survey emphasized dialogue, collaboration, and the importance of learning together. One museum educator said that a goal of these spaces is to 'provide opportunities for visitors to share their experience with others and to learn form and be inspired by others'. At the June 2005 J. Paul Getty Museum symposium, From Content to Play, Moreno and Dywan note the importance of the social experience for families, adding that the most 'powerful learning happens when families are together' and that collaborative learning fosters interaction between families and other adult/child visitors in the space.[92]

Gaining Knowledge & Skills: If there is any consensus among museum practitioners about the outcomes for a family interactive space it is that learning should happen there. Many educators reference learning in a general sense, such as: 'the space will provide dynamic learning experiences' and 'we will create a learning environment'.[93] When describing the family galleries
at the J. Paul Getty Museum Symposium, Edwards stated that 'above all, museums create interactive galleries in an effort to provide engaging and educational environments for families'.[94] What receives less agreement is what families should or might learn in the interactive galleries. Types of things they hope visitors will learn include basic elements of art and principles of design, how to look at art, how to interpret and evaluate works of art, and how to create art.[95]

Research supports practitioners' intentions that the interactive galleries are places to learn. Parents want to take their families to places where they all can do something worthwhile. Most often, experiences that offer learning opportunities are likely to be valued by parents whose goals are to provide their children with a range of positive cultural experiences. Evaluations conducted in interactive family galleries in art museums, have found that adults and children do believe that they increase their knowledge, skills, understanding, and awareness of art as a result of their experience in the space.[96] Families also say they benefit from museum experiences that support exploration and discovery. Studies conducted in the Speed Art Museum's Art Sparks and the Cincinnati Art Museum's Education Center found that parents highly value the fact that their children can explore using all of their senses and that they can discover art on their own.[97]

Some research suggests that there is a relationship between interactive museum experiences and critical thinking and communication skills. Exactly what that relation is, is not particularly clear. For example, Ash [98] reported that families visiting a life science museum use inquiry skills, such as observing, questioning, interpreting, and comparing and contrasting. Does the interactive experience then teach critical thinking and communication skills or provide a suitable environment where people can use and strengthen the skills they already have? Studies conducted in art museums have conflicting findings.

What we do and do not know about family
learning in art museums interactive spaces   10   *Adams, Luke, & Ancelet 2010*
                                                                                                            www.artmuseumfamilyspaces.org

Some researchers find that interactive galleries do encourage the development and enhancement of visual literacy skills, especially inquiry and looking skills.[99] Conversely, a recent study of the effect of an interactive gallery visit on a family's 'art talk' in the permanent collection suggested that the interactive gallery had no effect on the ways families talked about art together.[100]

Another type of learning that practitioners seem to be in agreement about is the importance of developing family galleries that allow visitors to make connections between the objects and experiences in the interactive space with the permanent collections and exhibitions. Practitioners intend for the interactive spaces to help families learn how to make cognitive and experiential links between the interactive gallery and the rest of the museum. Museum educators speaking at the J. Paul Getty's Symposium, From Content to Play, also emphasized the goal of having interactive galleries serve as transition spaces or "springboards" to the permanent collections. Educators at the Speed Art Museum also claim to have deliberately created their interactive learning galley Art Sparks to serve as a vehicle for families to connect to the permanent collection.[101] Very few research or evaluation studies addressed the issue of connections. There is some indication that visitors do value the opportunity to make connections between their prior knowledge and experience and the art museum experience but it has not been a strong focus of research.[102]

Shift in Attitudes & Perception:
This category of outcomes is perhaps the one that presents the most issues for researchers and practitioners. It attempts to address what is often referred to as the affective side of learning and the depth and breadth (or lack thereof) in the literature and practitioner survey may reflect the fact that the expansion of learning beyond a cognitive domain is still relatively new.

One attitude or perception shift that does show up in some research is that the museum can be a place that positively affects one's self-image or sense of self-esteem. A study in UK art museums found that visiting the art museum with their grandchildren helps enhance the grandparent's positive self-image because it makes them feel younger and gives them something to look forward to.[103] Another study of families in Australian museums found a similar trend, noting that museum visits can lead to changes in the way visitors perceive themselves and their identity and that in some cases, museums can help visitors to boost their confidence.[104] A study of families at a children's museum found that programs helped boost an individual's self-confidence and guided children in establishing 'independence and autonomy'.[105] A few studies found that families associate time spent with their children in an art museum with good parenting.[106] Parents feel that they are doing a good job when they take their children on worthwhile outings.

Another facet of self-image is creativity. Like self-esteem, a sense that one is a creative being cannot be taught as a skill like how to make a woodblock print can be taught. Rather we assume that people are inherently capable and creative, only needing the proper environment in which to blossom. Although several museum educators discuss the importance of building imagination skills, encouraging creative and imaginative play, and stimulating creativity and   flexible thinking,[107] the research data in this area was surprisingly scant.   While no studies looked specifically, at the relationship between the interactive spaces and the effect on visitors' perceptions of themselves as creative beings, some studies and our preliminary interviews for the research project suggested that families like interactive galleries because they believe these spaces stimulate their child's creative nature.

Other types of attitudes and perceptions are less evidence in the literature. For example, stimulating

visitors' curiosity and interest shows up as an important outcome for visitors in the few studies that looked at this attitude shift. In a study of the Museum of Fine Art, Houston's, education programs, visitors rated stimulating curiosity and a sense of awe and wonder about art higher than any other of the seven learning dimensions.108 Although learning something new and revisiting something already known were rated quite high, they were still lower than curiosity and awe. In that same study, art museum educators in three museums were asked to rate the degree to which they perceived that most visitors benefited or learned from their programs, using the same seven dimensions as the visitors used. Interestingly, practitioners and visitors rated learning something new equally high, but there was a large difference on their respective ratings of curiosity and awe. Where visitors rated curiosity and awe very high, practitioners rated them low. Similarly, very few museum practitioners mentioned stimulating curiosity as a goal or an outcome of their interactive space. How to interpret this difference between visitors' reported experience and the practitioner's perception presents the most difficulty. Did practitioners rate curiosity and awe low because they perceived that visitors did not receive these two benefits from their programs or do museum educators not have opportunities to witness visitors having their curiosity stimulating or engaging in the awe and wonder of a work of art?

Not surprisingly, when families are asked to describe what they find valuable about a museum experience, they often reference the fact that they can enjoy themselves and have a good time. In a study of an art museum interactive gallery, parents often assessed the quality of their experience according to how well their children enjoyed it.[109] Families in one interactive art space commented that their experience led them to believe that museums can be fun.[110] Practitioners in the 2008 web survey support these findings when they describe their intentions to provide an engaging and entertaining learning environment. Some museum educators go so far as to say that a goal is for visitors to have fun in the interactive galleries and explore art through creative play. Practitioners use word like 'enjoyable,' 'delightful,' 'fun,' and 'exciting' to describe the interactive spaces.

Stating fun or enjoyment as an outcome of a museum visit is sometimes balked at by art museum practitioners, particularly directors and curators, and sometimes by researchers. They counter that having fun is not an outcome, certainly not a learning outcome. Rather it is just a way that people might feel about the experience. Also, many people equate having fun with noise, running, and/or touching everything in sight. It is enough to make art curators feel quite faint.

But this resistance to fun as a learning outcome deserves attention. It is fair to ask if having fun is a benefit for visitors in an interactive family gallery. It does feel a bit frivolous, especially for something as serious as an art museum. Certainly, whether or not something is considered fun depends on the individual. However, if someone values the art museum experience because it was fun, for whatever reason, then their attitude towards the museum and perhaps towards art is more positive. Some studies argue that interactive spaces in art museums help to change families' perceptions of art museums as being family unfriendly and elitist.[111] Many parents do not perceive the art museum, itself as a fun place to be. If a learning experience is associated with feeling of happiness and well-being then that learning is more likely to be remembered, repeated, and/or expanded upon. Political and economic researchers are beginning to use happiness scales as one way to take the pulse of the population.[112] Finally, art museum educators are using the word 'fun' in their descriptions of family programs. Search Google for 'fun in art museums' and notice the 25 million-plus hits. Perhaps labelling fun a learning outcome is a stretch, but it certainly a value of the experience for families and parents feel that the whole family benefits when they have had an enjoyable and worthwhile outing together.

A similar dilemma can be found in the research findings showing that families value museum

experiences that allow them to feel relaxed and comfortable. In recent evaluations, researchers found that parents view family-oriented interactive spaces in art museums as physically and emotionally safe places for their children to play and explore. These parents say that one of the main benefits of participating in family-oriented events and activities is that their children develop a sense of ownership and belonging at the art museum.[113] Williams suggests that families often feel comfortable in these spaces because they don't have to worry about their children destroying previous art works and do not feel the discomfort associated with being observed by security guards.[114] Practitioners understand how much families value a relaxed and comfortable environment and describe their intentions to create a welcoming space that instils confidence.[115]

How does the value of interactive galleries in art museums intersect with and support a family's core values?

A visit to a museum does not occur as a solitary event that begins when the family enters through the revolving doors and ends when they return to their cars. Studies of families in museums suggest that parents often have post-visit discussions with their children in the car, back at home, or during other family events.[116] For example, Ellenbogen found that families who frequently visit museums (including art museums) often discussed their visit over dinner or referred to it when engaged in a related activity later on. However, we know very little about how families integrate their art museum experiences into their daily lives or how those experiences support their learning agendas, family values, and family relationships. This issue was not directly addressed in the 2008 web survey of practitioners nor did it emerge on its own.

Implications for Practice & Research

Implications for Practice: How can this review of literature inform the practice of museum educators responsible for family programs in the art museum? We can answer this by reviewing the areas where practitioners seem to have the strongest conceptual grasp and where they can begin to do more work. The findings here strongly support the idea that museum practitioners have figured out how to create rich environments that successfully facilitate visitors' learning of knowledge and skills. This is not surprising as practitioners most often enter art museum work with a background in art history or art studio.

Art museum practitioners have made encouraging progress in their understanding of how to create environments that foster high quality social interaction. However, they could explore this area more thoroughly and more consciously in their practice. It is clear that families come to the museum for a social experience so they will engage with each other anyway. Yet, family programs and interactive spaces could be more proactively designed to provide opportunities for families to learn about each other and to collaboratively create and explore. This will require some experimentation and careful observation of the ways the families naturally interact and how specific interventions enhance the family's agenda. Practitioners might begin by articulating what relationship-building might look like in their interactive space. Then each experience within that space can be mapped onto this vision. How do the various components in the space contribute not just to social interaction but to relationship building?

The areas where practitioners can make the most impact and, perhaps, have the most fun, are in exploring ways to make the connections issue explicit. Take the opening scenario to this article where the mother hurries her children away from the museum collections, down to the interactive family gallery. In this

same museum we have listened to many other families tell us that they do not visit the permanent collections or exhibitions much at all, preferring to visit the interactive gallery only. In these conversations, families occasionally mentioned that they sometimes looked at a work or two that were on their path down to the interactive space. When we took a good hard look at the art in that pathway, there was very little to interest even the art aficionado. What if museum educators and curators thought differently about those exhibition areas that are essentially a curatorial afterthought? What if those areas were specifically designed to delight, to intrigue, to foster curiosity in those families who are headed for the interactive gallery? Might that help families make connections between the interactive space and the rest of the museum? While the interactive spaces do draw more families to the art museum, they cannot make up for exhibitions and collections that are not, in themselves, engaging for families.

Perhaps the family galleries are asked to shoulder too much responsibility for the larger museum's learning agenda. Is it fair to expect these spaces to make up for permanent collection galleries or exhibitions that are not family-friendly? Are these spaces the optimum learning environment for acquiring art-based knowledge? In many ways, family interactive galleries serve a role for art museums that children's symphonies do for the larger symphony orchestra. Few parents would take their little ones to a Wagner symphony, fearing that the experience would be so baffling and boring as turn the child off of classical music all together. In the same way, the interactive family galleries serve to introduce the art museum to young children and families unfamiliar with art museums in general. Then, as families become more comfortable, as children develop, and as museums create collection and exhibition galleries that better serve the needs of family learners, they will venture out more often into the rest of the museum.

Implications for Research: Clearly, there are some sizeable holes in the research literature. There are studies that provide insight into the demographics and psychographics of museum visitors in general, and more specifically there are studies that offer preliminary information about how visitors use interactive galleries in art museums (Questions 1 and 2). But when we return to the heart of our own research investigation – the notion of connection – there are still many unanswered questions for us. Clearly families are using interactive galleries in art museums. But who are those families? Are they relatively art savvy families who are already comfortable with the museum or are they 'newer' families, less familiar and less comfortable with art and museums? Questions about families' motivations for using these galleries persist as well. Is the gallery a destination in and of itself, or is it seen as one piece of the larger art museum experience?

Within the larger museum-based literature, we are able to understand something about our third question: What is the value of interactive galleries in art museums for families? In particular, the knowledge and skills-based value and the social value of these galleries are widely documented. However, there is very little data specific to the dedicated interactive galleries within art museums and some important questions remain unanswered. What is the nature of knowledge gained in these spaces and which types of knowledge tend to predominate? Is it knowledge about art or artists, artmaking, culture and context, critical thinking, or visual literacy? Or something else? While parents clearly make family outings to the art museum because they feel it is a worthwhile educational experience, is it really knowledge acquisition that they find most valuable? What little research there is in this area and our preliminary findings hint strongly that is not the case. Instead parents often see these galleries as play spaces, rich and unique play spaces where children can connect to their creative selves certainly, but parents tend not to have a school-like learning agenda. Their job is to raise children to become competent adults who can function in and contribute to the

*What we do and do not know about family
learning in art museums interactive spaces*   14   *Adams, Luke, & Ancelet 2010*
                                                                         www.artmuseumfamilyspaces.org

civil society. Perhaps they see the interactive experiences as one of the many ways they accomplish that particular learning task.

Even less is known about how interactive galleries in art museums might influence families' attitudes and perceptions – towards art and art museums, and about themselves and others. Research suggests that families value interactive experiences in general because they perceive them to foster a child's sense of self. This included perception of self as confident, capable, and creative. However, we do not know much more than that parents think this happens. Our understanding of the role of interactive galleries in the stimulation of visitors' creativity and curiosity is superficial at best. The most troublesome value in this category is that of 'fun'. Families definitely value the fun-factor in these spaces, perceiving that learning is enhanced when everyone enjoys themselves, and museum practitioners understand that the spaces need to be engaging and enjoyable but there is still an uneasy relationship with the idea of fun in the art museum. If families value that the interactive spaces provide everyone a good time, what other attitudes and perceptions does that influence? How does fun in the art museum differ from fun in the MacDonald's play-space or making mud-pies in the backyard? Similarly, if families value these spaces because they are psychologically and physically safe is that a real outcome? Perhaps the outcome is not that families feel the interactive space is comfortable but that the comfortable, safe environment allows families to feel a sense of ownership in the museum and feel equipped to venture out into the rest of the art museum.

The most glaring gap in the literature is in the overarching area of connections. We understand next to nothing about if and how interactive galleries foster connections across individuals, family groups, the rest of the art museum, and the larger family learning agenda. A few studies manage to pick up that families do continue the experience after the museum visit through discussion and activities, but we know little beyond that. Since art museum educators stress the importance of the interactive galleries as bridges between families and the rest of the art museum, this is clearly a critical research need for the field. What are the ways in which these spaces most successfully foster the different types of connections? What effect on connection- making do interactive spaces have over time? What types of families and ages of children make what types of connections most often? How does the value of interactive spaces in art museums intersect with and support a family's core values?

Our collaborative research study will explore the nuances of how families connect and value the interactive gallery experience in the context of the whole museum and their own values that connect them as a family unit. And it is our hope that this article will spur continued discussion and further research in these areas.

END NOTES

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[1] In this article we use the term 'interactive' to describe an experience that allows visitors to touch and manipulate the environment and to engage in exploratory and creative play. The use of computer or digital technology may or may not be a part of these spaces. In addition, in the U.S. the term 'art museum' is standard usage; galleries denote spaces within an art museum.

[2] The 2008 web survey and comprehensive literature review are part of a larger collaborative research study in the U.S. on intergenerational learning in art museum interactive spaces. This study is funded by the Institute for Museum & Library Services (IMLS), a U.S. federal funding agency. The museum partners in the research are: Frist Center for the Visual Arts in Nashville, Tennessee; High Museum of Art in Atlanta, Georgia; and the Speed Art Museum in Louisville, Kentucky; the research partners are: Audience Focus Inc. of Annapolis, Maryland; and the Institute for Learning Innovation of Edgewater, Maryland. A website/tool-kit will be launched in late 2010 and research findings will be reported over the next 2 years; the URL will be: www.familiesinartmuseums.org as of September 2010. NOTE: The URL has changed to www.artmuseumfamilyspaces.org as of

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