

I. ADMINISTRATIVE INFORMATION

Institution: Mattress Factory museum of contemporary art

Project Title: You Are the Artist!

Award Amount: \$25,000

Total Project Cost: \$36,231

Grant Start Date: 10/01/2012

Grant End Date: 9/30/2013

Project Director Name: **Felice Cleveland**, Mattress Factory Director of Education

Project Team: **Felice Cleveland** and **Shannon Berkheiser** Mattress Factory Education Programs Coordinator worked on this project with the following experts:

Michelle Figlar is the Executive Director for the Pittsburgh Association for the Education of Young Children (PAEYC) <http://www.paeyc.org/> ;

Sue Polojac is Director of Programming at PAEYC;

Lisa Brahms is Director of Learning and Research at The Children's Museum of Pittsburgh <https://pittsburghkids.org/> ;

Melissa Butler was on special assignment as a Resident Teacher at The Children's Museum during this project; she teaches Kindergarten at Pittsburgh Allegheny K-5

<http://discoverpps.org/school.php?id=102> ;

Shirley Saldamarco is the Director of Creative Services and a member of the Faculty and

John J. Dessler is on the Faculty at Carnegie Mellon University's Entertainment Technology Center (ETC) <http://www.etc.cmu.edu/site/> .

2. PROJECT SUMMARY

The Mattress Factory Education Department conducted the research phase for developing programs and resources for children 3-6 years old, related to selected works in the museum's permanent collection. This material was to be used to create a digital application for the iPad, entitled **You Are The Artist!** Mattress Factory education and media staff worked in collaboration with a great project team that included representatives from the Entertainment Technology Center at Carnegie Mellon University, The Pittsburgh Chapter of the Association for the Education of Young Children, the Pittsburgh Children's Museum and Pittsburgh Public Schools. Contemporary art has many entry points and learning opportunities for young children and we were excited to learn more about how to work with this audience within the context of contemporary installation art.

The research and development phase took place over one year from October 1, 2012 through September 30, 2013 and included Research, Setting Learning Goals, Content Development, Evaluation and a Report/White Paper. IMLS Funding was used to pay project consultants, provide partial support for museum staff involved in the project and pay for materials used in conducting research.

The goals of this project were to meet two needs for art museums: a) Increased art museum programming/resources for children 3-6 years old using contemporary art; and b) Use of technology to engage young children. We learned that contemporary art provides a great learning resource for families with young children, but that we need to provide support materials for parents and teachers, as well as programs specifically for this age group. During the entire research process we examined whether a digital mobile app was the best and most equitable way to deliver this information, and we discovered that other ways of conveying information would be more effective at this time.

3. PROCESS

How did you accomplish your work and what types of resources (financial, management, human) were needed?

At the project start and throughout the course of grant activities, Mattress Factory education staff met with and communicated with the project team to devise and refine a schedule of research activities to discover what resources and support families and young children need to have a rewarding and enjoyable experience at the Mattress Factory. The activities were focused on selected works in the permanent collection that are always on view and allow viewers to touch and move through the works. These included two light installations by James Turrell, *Danaë*, 1983 and *Catso Red*, 1994; the Mattress Factory Garden, 1997, by Winifred Lutz with a sound work, *Music for a Garden*, by Rolf Julius; and two mirrored room installations by Yayoi Kusama, *Infinity Dots Mirrored Room*, 1996, and *Repetitive Vision*, 1996.

The following research activities took place for this project:



1. Observation: Mattress Factory Museum Educators conducted observations of families with young children in the galleries. Museum educators filled out forms to record how adults and children interacted with each other in the galleries. We wanted to see what questions parents asked their children, what questions children asked and how families responded to the installations. This activity took place from December 2012 through March 2013. Sixteen families were observed. This data acted as a control, with these families receiving no assistance or guidance

during their museum visits. This raw material helped to guide the rest of our research and enabled us to be sensitive to the kind of information that this audience requires.

2. Teacher Input: On January 16, 2013 the museum hosted an Educator Open House for pre-K and Kindergarten teachers. Forty educators attended, most of whom had never been to the Mattress Factory before. They toured the museum's permanent collection with museum educators and their questions and responses to the works were recorded on video or audio. After the tours, the Pre-K educators met in the museum lobby, and discussed how they would use these installations for educational opportunities for their young students. They provided their responses by writing their answers to questions on post-its, which were placed under the titles of the installations they had seen. The following questions were asked for each work:

- What questions do you have about this piece?
- What questions would a student have about this art?
- What questions would you ask your students to engage them in this artwork?

You can see from this line of inquiry, that we are not providing “facts” about the work, but providing guidance to help teachers understand how they can engage their students with the work of art.

Through the tour and questions, the educators began to explore the connections they could make between the Mattress Factory installations and the themes and content in their classrooms.

3. Study Participants: We worked with eleven families with children ages three to six years old, who responded to a call for participants. We invited them to visit the Mattress Factory two times in a five-month period. During the first visit, families went through the galleries with a flip cam recording their visit at their own pace followed by an interview with a museum staff member. Before the second visit, we requested that the families conduct a photo scavenger hunt and bring those photos to show us before the visit. We sent each of the families a "discovery sheet" of things / places we would like them to identify in their home / school / life. We asked them to take pictures when possible (even on a phone) of what they found. Each of the things we asked them to identify relates to the Mattress Factory permanent installations described above. We stressed to the families that this is not homework; we hoped they would be creative and have fun with items and questions that were the most interesting to them.



Boy with cube related to light cube in Catso Red, by Jame Turrell

When the families returned to the museum, we asked them to show us what they found, talk about the process and find out why they chose what they did and why it was interesting to them. We then gave parents this same list of items with the added information of what installation each item matched (ie. chair = The Garden; an object with a pattern = Kusama). In the second part of the scavenger hunt, they matched these objects and themes on the sheet with museum installations.

During the second visit, we also included an easy hands-on project in which children made a collage and put it in a black light box to see what glows. (This project relates to Turrell's *Danaë*, and Kusama's *Infinity Dots Mirrored Room*.) This provided another instance where we could see if young children are able to make the connection between the work of art and something else. During this activity, we talked with families again about the connections between the museum and home. Do the students choose the same sorts of objects? Are they making connections between what they see at the museum and what they see at home? Are they learning new words and concepts to describe art? Are they beginning to think about art in a new way?

4. Pre School Visits: During the grant period, we hosted a class of ten four-year-old students from Shadylane School, a private pre-school. Shannon Berkheiser, Mattress Factory Education Programs Coordinator, visited the school for a pre-visit activity based on the Scavenger Hunt that we used with families. The class toured the museum on a Saturday, which allowed their parents to come along. The museum also hosted twenty parents and children from the Pittsburgh Public School's Early Childhood Education Program, sharing with them the resources available for young students, making them aware of this research project and soliciting their input.

Museum education staff, including museum educators, carried out the project research activities. IMLS funds enabled the museum to pay consultants who added a great deal of knowledge and

expertise in early childhood education and digital technology to the Project Team. As the research progressed and we had regular meetings with the Project Team, we began to question whether an iPad app was the best way to go with what we learning about families in the museum. Museum staff from the development and education departments looked deeper into the costs of creating and updating an iPad app and explored funding sources. Our original estimate of the cost of creating the app doubled during the course of a year.

Describe any organizational or policy changes necessary to accomplish your work?

Director of Education, Elizabeth Keller; and Marketing Manager, Lindsay O’Leary, who both worked on and were key project staff in the original grant, left the organization before the project started. Felice Cleveland is the new Director of Education and has managed all the grant project activities.

Describe any mid-course corrections?

Before we could focus our research specifically on what an iPad application would look like and how it would be designed, we had to start with some very basic questions about how 3-to-6-year-old children respond to contemporary installation art.

Through discussions with other museums that had created digital apps (Museum of Modern Art and Andy Warhol Museum) we began to realize that creating an iPad app was not the most appropriate and cost effective solution for the Mattress Factory at this time. It is also very important to us as an institution to create programming that is accessible to all of our visitors. It appears that many of our visitors have access to smart phones, but tablets are more rare.

In addition, during this grant period, the Mattress Factory has been working with Whirl-i-Gig, Inc. to totally redesign the museum’s website to accommodate an increased amount of interaction with our audience. This new website will feature special options for families with young children and Pre-K educators, including information about age-appropriate programs at the museum, a Parent Guide to bringing young children to the Mattress Factory, Family Guide and Installation Art activities, which can be used prior to or after a visit to reinforce learning outcomes. In addition, the new website will be compatible for viewing on smartphones or iPads. The new website will also provides easy access to extensive information about the artists and works on view.

Project Technology Consultant John Dessler stated in his final comments: “Current trends and use of digital information seem to dilute some of the parent-to-child interaction and communication. Museums and the arts help to bring learning into real world, tactile, and emotional existence. One role of museums and the arts is to help pull users off of the screen and into shared life experiences. . . . The conversations and the impact of museums and exploring the arts helps us to understand each other and gives us ways of expressing and communicating our emotions and thoughts.”

However, Mattress Factory staff are always examining and implementing appropriate use of technology to engage all museum visitors. Consultant Shirley Saldamarco stated: “Whether it’s children or adult visitors, I think that it’s crucial for museums not to be seen as places where “dead things” reside. Several other museums that I work with . . . are also looking for ways to integrate technology to make the museum an interactive, more alive place.”

4. PROJECT RESULTS

What did you learn and why is it important to the field and its audiences?

In our research, we were able to prove an assumption that is the basis for our project: installation art provides a great opportunity for families and young children to interact and learn together. This was true even for most of the families who were only observed and had no interaction with museum staff. This may be because installation art provides a haptic learning experience instead of a cognitive experience alone. Installation art allows individuals as young as three years old to think like an artist, observing an environment, discussing different aspects about it, and thinking of ways they could creatively change that space.

As we began to undertake research, we realized that this project was really about discovering how children and families learn together in the museum and how museums can use installation art to promote this in a new and interesting way. For young children, the focus should be on “Big Ideas” that can be used in most museum environments. These include using museum exhibitions to focus on Perception and Observation; Description and Language Skills; Visual/Spatial Thinking; Relationship of Museum and Home/School Environments; and the idea that making can be Collaborative, as well as individual.

We learned that just as much attention needs to be focused on the parents and their interaction with their child, instead of focusing on the child alone. Children are naturally curious and many of the questions / fears / hesitations related to interaction with contemporary art originated with the parents. Also parents sometimes needed permission for “exploration” or to think about new ideas from a child’s point of view. In a contemporary art museum it isn’t about having the one right answer, but about discovery and discussion of new ideas.



Study participants enjoying a family day activity at the museum.

We learned that we must have a variety of support systems in place for families to help them feel comfortable in the museum. Even in a place like the Mattress Factory, parents and pre-school teachers still have the perception that there are certain approved behaviors and knowledge requirements for visiting. Melissa Butler, a kindergarten teacher who has brought her inner city students to the museum for more than ten years, states: “I think the Mattress Factory is the most ready place in Pittsburgh to engage in meaningful, in-depth thinking about young children’s learning. Which is also surprising because most people see the museum as a place not suitable for young children. So, this is interesting to me. There is a vibrant space at the Mattress Factory for examining this contradiction.”

Providing a family guide, parent guide and regular programming are the essential next steps before deciding whether or not there is a place for technology in the programming. We learned that we have many educational opportunities that do not depend on technology, or can utilize a simpler form

of technology. Technology should enhance the experience not replace it. It is very important that children and families interact with the installations.

Preparing families for a visit through pre and post visit resources and activities is challenging, but truly deepens an experience at the museum. During the second visit, families who used the scavenger hunt achieved the following outcomes:

1. Children looked more closely at the world around them.
2. Children made the connection between art at the museum and their home / school / life.
3. Children thought about space in a new way, especially about how they can change and impact space.

“The [Mattress Factory] was a great experience both times. I had previously worried about bringing children there, with concerns that they might break something, be distracting, etc. However, the exhibits were accessible, and it’s a great way to just surround them with art, even if it’s not what small children always think of when they hear the word “art” . . . she is more likely to think of painting / sculptures.” Parent of a 3-6 year old (response from final survey).

Why do you think this research is important to the field of museum / art education?

While it must be acknowledged that there is a great deal of research being done on the education of young children, art museum education programs and resources specifically for this age group are more rare. Programs and museums that focus on contemporary art are even more unusual.

Project Team consultant Melissa Butler states: “I think this research is tremendously important because I don’t know of any research looking at young children’s learning – family learning – installation art museum learning. This is a rare triangle. I think there is a huge transformative promise in learning based in contemporary installation art museums because of the opportunity for metaphor and deep interdisciplinary connections. Metaphor is perhaps one of the highest levels of thinking we can encourage in children, one strongly connected to algebraic thinking and one most significantly needed in order to focus on reducing the racial achievement gap.”

Describe the results of your project. Were the results what you expected or were there unexpected findings?

With most grant-supported projects, we usually don’t have the luxury to spend a year doing research, prior to implementing a new program. Support from the IMLS Sparks! Ignition program, enabled the museum education department to gather expertise and work with families to design and create materials and programs that will be more effective and actually used by our intended audience. The fact that parents did not embrace technology with open arms was surprising.

Families were surveyed at the end of the project:

- Most families felt that the Mattress Factory was a great place to bring their young children.
- All parents said they would use a printed family or parent guide or information about certain works. Many suggested we create one. They would have liked to know before the visit about some installations with adult content and two works by James Turrell, which were in darkened spaces.

- All children, except one, were able to use the scavenger hunt to make connections between what they saw in the museum and something at home or from their own experience.
- All families said they would appreciate and participate in programming at the museum for young children.
- Only three parents said they would use an iPad app based on museum installations; two said maybe they would use it; and two said they would not use it. Several of the parents stated in the survey that they deliberately limit their children's screen time.

The research process confirmed many ideas that we had been considering as we began this project. The education staff needs to focus on creating materials, information and programs to attract and serve the family audience, so that if we do create an iPad application in the future, there will be visitors that are excited and willing to use it.

What are the next steps for your institution?

The Mattress Factory was awarded a grant from the Pittsburgh-based Sprout Fund to continue our work with 3-6 year olds on a project called *Mini-Factory*. Through an RFP process, we recruited a professional artist to design and create a portable environment to be used by young children in the museum or at community sites to explore 21st century learning skills (Observation, Description, Spatial Relationships, Museum/Home Relationships and Collaboration) using installation art as a resource. This portable, adaptable environment can be arranged in a variety of ways to facilitate discussions about space. All of the activities will be collaborative and team-building resulting in a group installation—as opposed to the traditional “make and take” visual art learning model. This project also includes development of resource materials—printed and digital—to help parents and educators use these ideas at home and in school.

“I think the Mattress Factory is taking amazing steps with a continued focus on access and equity, including outreach to libraries and other museums, including focus on neighborhood afterschool programs, including outreach to the Kids+Creativity Network, including receiving a Sprout grant to further work with young neighborhood children, among other things. I think the Mattress Factory is well poised to be a leader in museum-based learning and museum-inspired learning for low-income communities. Next steps should only be to continue with work and focus on equity. It is needed and important.” Melissa Butler

Based on this project, what recommendations would you make to the museum field?

This project explored two issues of importance to most museums today: attracting and serving families with young children; and using technology to enhance the museum experience. We discovered that both topics are promising areas of inquiry for any museum. However, based on our experience working with families at the Mattress Factory, we are undertaking the next steps to develop materials and programs specifically for young children and their parents and educators that use a simpler approach to technology, including printed materials and information on our website.

The issue of using technology was somewhat more problematic. The Mattress Factory—like most museums—must consider the most cost effective approaches to its projects and programs. The expense and somewhat lukewarm response of study participants to using an iPad app made us rethink this part of the project.

Project Team Consultant, Shirley Saldamarco suggested: “My personal mantra is to remember that (1) tech is not always the answer and (2) when using tech it should be supplemental to the experience and not replace it...Leverage the use of technology both for pre and post visits but also as a tool for what you’re trying to achieve. Don’t lose sight of who/what you really are and allow technology to become the focus rather than the tool.”

Resources:

Following in the legacy of Fred Rogers, Pittsburgh has become home to a wealth of activities and resources focused on improving learning and creativity for young children with a special focus on using technology. The *Pittsburgh Kids + Creativity Network*, <http://remakelearning.org>, to which the Mattress Factory belongs, provides a rich and diverse network of people and organizations that focus on community/school partnerships to improve kids’ learning. Most of our project team consultants were drawn from this network. In addition, a grant from the Sprout Fund, which administers the Pittsburgh Kids + Creativity Network, is enabling the Mattress Factory to develop and implement learning materials and programming for young children and their families.

In addition to our Project Team consultants, we found the following information helpful:

In “Computers: Preschoolers” <http://www.pbs.org/parents/childrenandmedia/> the author makes the point that interaction with parents and older siblings should be an important part of a quality digital experience.

A position statement, January 2012, prepared by the National Association for the Education of Young Children (NAEYC) and the Fred Rogers Center at St. Vincent College, Pittsburgh, reinforces these same goals http://www.naeyc.org/files/naeyc/file/positions/PS_technology_WEB2.pdf. “It is the position of NAEYC and the Fred Rogers Center that Technology and interactive media tools can promote effective learning and development when they are used intentionally by early childhood educators, within the framework of developmentally appropriate practice to support learning goals established for individual children.” (page 5)

In “The 10 Best Art Museums for Kids,” (2012) at <http://www.parents.com/fun/vacation/us-destinations/the-10-best-art-museums-for-kids/?page=1> the author describes traditional approaches to presenting material to young children, such as classes, education rooms, and specialized tours.

Study of the use of technology for engaging children in museum learning continues. More recent information and thinking on the subject include the following:

<http://danamus.es/2013/03/20/top-6-things-i-learned-from-museums-and-mobile-conference-6/>

<http://remakelearning.org/blog/2013/10/28/how-early-childhood-educators-use-technology-in-the-classroom/>