

Sample Application
2007 National Leadership Grants for
Museums

Research and Development

Frist Center for the Visual Arts
Nashville, TN

Family Learning in Interactive
Galleries

Abstract

As much as family interactive galleries in art museums are heralded for the rich opportunities they offer families in exploring art together, little is known about what families actually learn from their experience in these interactive spaces or how the art museum experience connects with a family's larger context of learning together. A handful of unpublished evaluation studies in this area hint at the educational potential of family galleries in art museums, they are not generalizable given their situational focus on one particular museum and its family experience. Comprehensive, systematic research is needed across multiple art museums to fully understand how family galleries facilitate intergenerational learning, and what forms that learning takes. Educators at the Frist Center for the Visual Arts will partner with educators at the High Museum of Art and Speed Art Museum and researchers at the Institute for Learning Innovation to conduct a seminal study of family learning in interactive galleries. This research will take place over 3 years between October 2007 and September 2010 and will seek to answer these research questions:

1. How does the larger professional field define anticipated learning outcomes for intergenerational audiences in interactive museum experiences?
2. What instruments and tools most reliably collect valid evidence of intergenerational learning in interactive museum experiences?
3. How and in what ways do interactive museum experiences facilitate and enhance intergenerational learning?

A full literature review of related fields begins this research initiative. The review provides a theoretical and research background for a national working conference of educators to develop a set of learning outcomes for interactive family galleries. (From this conference, a core group of national advisors for the project will be selected.) Based on these outcomes, two studies will be implemented. A Large-Scale study of 2,100 family visitors across the three partner museums will gather data via observations, tracking, entry and exit interviews, and post-visit web-surveys. A Longitudinal ethnographic study complements the larger study by providing rich and nuanced data from 18 families (6 per partner museum) on the ways in which the museum interactive experience is integrated into the larger scope of family learning.

Research results will address the needs of four main audience groups. Ultimately intergenerational/family visitors will benefit through more appropriate interactive learning experiences; museum professionals will have valid, reliable, and generalizable data needed to make a strong case for initiating and sustaining family interactive learning environments; staff at partner museums enhance their practice through cross-fertilization of ideas and make program decisions based on rigorous research; researchers in visitor studies and museum program evaluation have access to research designs, instruments, and analysis procedures for future studies.

This research initiative will result in:

- A set of realistic and measurable learning outcomes in museum interactive intergenerational learning spaces developed through a national consensus among museum practitioners and researchers;
- A clearer understanding of intergenerational learning through the design and implementation of a rigorous research study across three museums, resulting in a methodology and tested instruments accessible to the professional field;
- A multi-media interactive tool kit available on DVD and website to use on a variety of levels and to disseminate the results of this seminal study broadly across the professional field.

Narrative

1. Assessment of Need

“Families are the main context of learning for most people. Learning within the family is usually more lasting and influential than any other. Family life provides a foundation and context for all learning.”

Riches Beyond Price: Making the Most of Family Learning, NIACE, 1995

Families are the first and often times most influential learning group within an individual’s life. Through conversations and social interactions, family members young and old learn from each other continuously. They talk about what they see, hear and read, relating it to their previous experiences and memories, and modeling behavior and actions for one another.

Museums can be powerful places for family learning. They offer unique contexts in which families may spend quality time talking and drawing upon individual and collective memories to make sense of the world around them (Ash, 2003; Crowley, 2001; Crowley & Callanan, 2001). As the number of families visiting museums increases, however, the field needs more research on the family learning experience (Ellenbogen, Luke & Dierking, 2004). We believe it is critical for museums to better understand the nature of family audiences and the museum’s role in facilitating quality intergenerational learning.

Much of what is known about family learning in museums comes from studies conducted in science centers and children’s museums (Ash, 2003; Borun & Dritsas, 1996; Borun et al., 1998; Crowley et al., 2001; Ellenbogen, Luke & Dierking, 2004). There is little research focused on families in art museums, despite the fact that more than 90% of art museums nationwide offer specialized programming for families (Wetterlund & Sayre, 2003). Increasing numbers of art museums are targeting families through interactive experiences. Many such programs are family-based events in galleries, designed to encourage parents and children to engage with works of art together. Recently, however, many art museums are developing dedicated spaces for families. Examples of such family galleries can be seen at the Speed Art Museum (Art Sparks Interactive Gallery), Frist Center for the Visual Arts (Martin ArtQuest Gallery), High Museum of Art (Greene Family Learning Gallery) Los Angeles County Museum of Art (LACMA Lab), J. Paul Getty Museum (Family Room), Art Institute of Chicago (Kraft Education Center), and many more sites across the country. Many other art museums are in the process of creating such spaces, intended to offer parents and children a place to explore, engage, and interact with each other around art (Adams & Luke, 2005).

As much as these family galleries in art museums are being heralded for their rich learning opportunities, however, little is known about what families actually learn in these settings or how the art museum experience connects with a family’s larger context of learning together.

A handful of unpublished evaluation studies have been conducted in art museums. For instance, Luke and Stein (2005) interviewed and observed both first-time and repeat families visiting the Cincinnati Art Museum’s Education Center. They found that families, especially parents, could identify a range of outcomes from their experience, including: looking thoughtfully and carefully at works of art; developing new interests related to art, and talking with each other about issues and ideas related to art. Similarly, Adams & Stein (2004) examined the nature of family learning at the LACMA Lab, Los Angeles County Museum of Art’s family gallery. They found that families most appreciated highly physical experiences, as well as ones that related to their prior experience and interests. These studies hint at the educational potential of family galleries in art museums, but remain specific to individual places. At this point, the art museum field critically needs comprehensive, systematic research across multiple art museums, designed to provide vital and generalizable understanding of how such family galleries facilitate and support family learning.

In June 2005, the J. Paul Getty Museum, Los Angeles, convened the first U.S. symposium focused specifically on family-oriented interactive spaces in art and history museums. More than 160 museum educators, designers, researchers, architects, and consultants gathered at the Getty for 2-days of discussion focused on several key issues:

- How can interactive spaces best respond to the needs of family audiences?
- What is the role of the object in such spaces, and how should works of art be used and interpreted?

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- How do the values and philosophies of art museum professionals shape the spaces that we create for families (Adams & Luke, 2005)?

What emerged from these discussions was the realization that despite the increasing number of family-oriented, interactive spaces in museums, there is no clear agreement on learning expectations for these galleries. Furthermore, there is almost no research to document their impact on intergenerational learning. The closing address issued a clear call for comprehensive research to address these questions.

(www.getty.edu/education/symposium).

This research project is a direct response to that call. By examining ways in which family-oriented interactive spaces in art museums foster intergenerational learning, the research will build collective understanding in the field and will provide practitioners with research-based theory on which to base their programs. This research will serve the following multiple audiences through increased understanding and improved practice.

Research Project Audience Needs & Benefits	
Audience 1: Inter-generational/family visitors (groups of 2 or more adults & children)	
Needs: Safe, welcoming, intellectually stimulating, personally meaningful, and physically engaging environment for family learning	Benefits: Wider array of appropriate and appealing family learning experiences in art museums
Audience 2: Partner Museum Staff & Volunteers	
Needs: Evidence that supports and improves practitioners' efforts in intergenerational learning and interactive learning in the museum; Ways to attract & hold more families to the museum and engage them more fully with the collection & exhibitions	Benefits: Stimulation and cross-fertilization of partner museums and researchers; Ability to base program and exhibition decisions on applicable research results; Data to guide informed decisions on development of meaningful family experiences
Audience 3: Museum professionals; Community & Family Educators	
Needs: Fully researched model for intergenerational learning in object-based museums that will guide development of interactive experiences; Practical and effective ways to self-assess intergenerational learning in interactive museum experiences	Benefits: A case for sustaining and/or initiating intergenerational interactive experiences in the museum; Ability to provide clear, systematically collected and analyzed, valid and reliable data to supervisors, boards, and funders about intergenerational learning
Audience 4: Educational Researchers & Museum Program Evaluators	
Needs: Clearer understanding of what family learning looks like in museum interactive experiences; Reliable and valid methods for assessing intergenerational learning in the museum	Benefits: Research aligns with and informs practice; Research that provides a model for the field resulting in more useful data

2. National Impact and Intended Results

This innovative research clearly addresses the enormous need for continued study of learning in family galleries, from sharing what is currently known to investigating deeper levels of understanding. Because this research will be the seminal work in the field, it has the potential to influence research and practice for decades.

The unique partnership of three museums, the Frist Center for the Visual Arts in Nashville, TN, the High Museum of Art in Atlanta, GA, and the Speed Art Museum in Louisville, KY, led by researchers at the Institute for Learning Innovation (Institute) is a unique strength of this research project. The partnership offers rich and diverse settings in which to conduct the work and is organized by a highly experienced team of researchers.

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Results from this research will make such significant contributions to art museum education nationwide, as:

- A clear, agreed upon, set of learning expectations for family-oriented spaces in art museums;
- Guidance to practitioners to better understand the nature of the learning within these spaces;
- Identification of the variety of learning outcomes that families experience in these spaces;
- Findings that situate family-oriented art museum experiences within a larger educational infrastructure. (Specifically, these findings will help the field understand how families integrate their art museum experience into their individual and collective lives and how they make meaning from their experience over time.)

These collective understandings will result in museum practice that is based on valid and reliable research and theory, rather than solely on hunch and educated guess.

This research project will yield findings that will be generalizable and useful to the field. By using three museums, the study will apply multiple measures, allowing data results to be triangulated. Two separate measures will be employed within this research: 1) a Large-Scale study with a sample size ample enough to allow for strength and rigor in the analysis through multiple measures; and 2) a Longitudinal Study, also triangulated through multiple measures that adds depth and richness to the quantitative data.

The reasons that these three art museums and the Institute for Learning Innovation have joined together in this research effort are notable:

- 1) Concentrating solely on interactive galleries in art museums allows for greater focus and rigor in the research design. Findings, however, should be applicable for other types of museums, especially those that are strongly object-based.
- 2) The regional proximity of the museums allows staff to work closely together visiting each other’s spaces frequently and attending full team meetings consistently;
- 3) Art museums in the southern region have been leaders and innovators in the area of intergenerational interactive learning in museums;
- 4) The variations in size of the museums and approach to the intergenerational interactive space reflect the diversity seen in other museums across the country with interactive galleries.
- 5) Researchers at the Institute for Learning Innovation have a long history of working with these museums and studying the nature of their interactive spaces.

The following table illustrates comparisons across the three museums.

	Frist Center for Visual Arts	High Museum of Art	Speed Art Museum
Interactive Gallery	Martin ArtQuest Gallery	Greene Family Learning Gallery	Art Sparks Interactive Gallery
Size	4,000 sq. ft.	2,000 sq. ft.	4,500 sq. ft
Time open	5 years	1 year	10 years
Staffing	1 full-time; 3 part-time; plus volunteers/docents	1 part-time at peak visitation only	1 full-time; 5 part-time; plus volunteers/docents
Gallery Audience	Families and school groups	Families only	Families and school groups
Type of Experience	Interactive stations explore visual art concepts & ideas many with consumables; Area for wet & dry art making	Creative, open-ended play based on works in collection; no consumables (art making elsewhere in museum)	Interactive stations, some with consumables; Adjoining studio for wet & dry art making; separate pre-school area

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Original art	Yes – protective covering and reproductions	None – only reproductions	Yes – protective covering
Annual attendance	180,000	350,000	120,000
Annual budget	\$11.5 million	\$25 million	\$5.1 million
Metro area population	1.6 million	9 million	700,000

3. Research Project Design & Evaluation Plan

This proposal seeks support for a three-year research project of family learning in art museum interactive galleries that is a collaboration of three southeast regional art museums, the Frist Center for the Visual Arts (the fiscal agent for the grant), the High Museum of Art, and the Speed Art Museum, working together with the Institute for Learning Innovation. All three regional museums currently have designated spaces for interactive intergenerational learning. All three have established relationships with the Institute for Learning Innovation.

Research Questions: The research questions to be addressed are:

1. How does the museum field define anticipated learning outcomes for intergenerational audiences in interactive museum experiences?
2. What instruments and tools most reliably collect valid evidence of intergenerational learning in interactive museum experiences?
3. How and in what ways do interactive museum experiences facilitate and enhance intergenerational learning?

Project Goals: The overall project goal is to deepen the understanding of the nature of learning that takes place in interactive, family galleries in art museums and to provide information and tools that enrich the development and impact of such spaces in the future. The individual goals necessary to achieve this are:

- To articulate a set of realistic and measurable learning outcomes in museum interactive intergenerational learning spaces;
- To develop a methodology and test instruments that support a rigorous study of intergenerational learning;
- To provide the professional field with well-tested methodology for their own use;
- To develop and disseminate a multi-media interactive tool kit that will stimulate a community of learners among museum practitioners and researchers

Project Components: The project is designed to take place over three years at three partner museums. The research team will be led by staff from the Institute for Learning Innovation (ILI), a non-profit educational research and development organization devoted to understanding and disseminating findings on learning in museums. Researchers at the Institute are uniquely qualified to undertake this study, having conducted numerous large-scale studies with all types of museums, cultural, and community organizations nationally and internationally (see resumes for further details).

Project components include a convening of a national working conference of museum educators and researchers, two parallel research studies, and a comprehensive tool kit for wide dissemination. The research studies include a Large-Scale study with random museum visitors and a Longitudinal Study, using an in-depth ethnographic approach with individual families. The project’s tool kit will consist of several components; the initial position paper outlining the learning outcomes developed by a national-level group of educators and researchers, the full study design with useful, reliable, and valid instruments to enable museum practitioners and

researchers to continue to study intergenerational learning in interactive galleries; a report of findings, a compilation of lessons learned from the three museums family gallery projects, and an advocacy piece to help museum staff build support for the development of family interactive experiences in the museum.

Work Plan

Study Participants for this research will come from the populations of Nashville, TN, Atlanta, GA, and Louisville, KY. The Large-Scale study will draw randomly from general visitors to the three museums. The Longitudinal study will be divided in half between families who are frequent museum visitors and families who have never visited the museum as a family unit. **Institutional review approval** for this project will be sought from Independent Review Consulting, Inc. (IRC) (www.irb-irc.com) in San Anselmo, CA. This organization has provided IRB review for many research projects at the Institute for Learning Innovation, including a recently completed 3-year research study with the Isabella Stewart Gardner Museum for the U.S. Department of Education.

Year One: The first year will address the research question: *How does the larger professional field define anticipated learning outcomes for intergenerational audiences in interactive museum experiences?*

Year One activities include:

1. A full literature review, synthesizing research in the fields of intergenerational learning, experiential or free-choice learning, and learning in museums. This literature review will inform the invited museum practitioners and researchers at a national working conference.
2. A national working conference of museum educators and researchers assembled to reach consensus on a set of realistic, meaningful, and measurable outcomes for learning in intergenerational interactive art museum spaces. From this conference, a national advisory board for the grant will be convened and review studies and project on a regular basis.
3. A position paper authored by Institute researchers and museum partners, to form the basis for the two research studies.
4. Intensive planning activities, undertaken face-to-face and through video teleconferencing. Planning will not only address the first three steps but will also prepare for the implementation of the studies in year 2. Planning includes: developing and testing protocols and instruments for both studies; developing sampling systems for the Large-Scale study, and recruiting 6 families (with children between age 5-18 living at home) to participate at each partner museum site – a total of 18 families.
5. Hiring of three full-time evaluation research assistants, one to be housed at each of the regional museums. The research assistants will be trained and managed by the Institute researchers and will work throughout the project. The purpose of the training process is two-fold: a) it assures that both studies are rigorously implemented by collecting data over a full twelve-month period. (This is rare in museum evaluation studies. The benefit, however, is a fuller picture of the intergenerational visitor groups across different seasons.) b) The presence of the research assistants at each museum builds organizational capacity and further institutionalizes the practice of visitor research in these museums.

Year Two: Year 2 focuses on investigating the second research question: *What instruments and tools most reliably collect valid evidence of intergenerational learning in interactive museum experiences?*

Year Two activities include:

1. A full team meeting of researchers and museum partners to review year 1 products: primarily 1) the position paper of learning outcomes and (2) results of pilot testing protocols and instruments.
2. Training of evaluation assistants will continue with an emphasis on data management and collection strategies.
3. Data collection for both studies, the Large-Scale and Longitudinal studies.

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Large-Scale study: Data sources include tracking and timing studies, semi-structured exit interviews, and written surveys at each partner museum, followed in 2-3 months by post-visit web surveys. The Large-Scale study uses traditional data collection methods and seeks a large sample size, at least 700 subjects in each museum (a total sample size of 2,100 museum visitors). The large sample size allows for a variety of parametric and non-parametric statistical analyses. Participating visitors will be randomly selected and invited to participate in the study over the twelve months of data collection.

Longitudinal study: This component is a year-long ethnographic study of 18 families (6 per partner museum.) Half of the families will represent frequent visitors to a partner museum and the other half will represent those who have not previously visited the museum as a family. The ethnographic approach allows for understanding family learning behavior where it happens. Researchers will be *participant-observers* within the families, conducting open-ended interviews in the home and accompanying families on visits to the museum and other family learning destinations. Families will tell us what is important to their learning through their words *and* actions. The ethnographic approach puts families at ease and allows researchers to build rapport and trust so that we can better understand family learning in a more global context. Typically, museum research is almost wholly museum-centric, collected only at the museum. Little or no data is collected on how the museum visit fits into the ongoing context of family learning. This study adds that richer component. The participating families at each museum will also meet together in a large group twice during the year. The first meeting will be introductory – allowing families to meet each other, better understand their role in the research, and provide some initial reflections on family learning. The second meeting will occur at the mid-point so that families can hear and respond to preliminary trends identified by researchers. This approach further strengthens the validity of the study by allowing families to agree or disagree with findings and further articulate the meaning of patterns and trends in the data.

Year Three: Year 3 focuses on the final research question: *How and in what ways do interactive museum experiences facilitate and enhance intergenerational learning?*

Year Three includes four main activities.

1. A thorough analysis of data from both studies. The Large-Scale Study will be analyzed through statistical tests, including basic frequencies and such comparative tests as t-tests, ANOVAs and possibly MANOVAs (or non-parametric equivalents). The analysis will examine the breadth and depth of the families' learning. Data from the Longitudinal Study will be analyzed using text analysis, a qualitative, detailed method that permits the systematic identification and coding of primary patterns and categories that emerged from in-depth, ethnographic interviews (Handwerker & Borgatti, 1998).
2. A comprehensive report, synthesizing all of the data findings, authored by Institute researchers.
3. The assembly and production of the tool kit:
 - Elements to be prepared by the ILI Research Team will include: 1) the position paper generated at the Year One working conference; 2) the completed written report of results and implications; 3) a complete description of the study design and assessment tools; 4) a data base analysis template; 5) a training component with instruction on how to replicate or adapt the study.
 - Elements to be prepared by the museum partners will include: 1) a "how-to" guide to the development of intergenerational learning spaces in museums – including "lessons learned"; 2) an advocacy piece to assist practitioners in building support for such spaces from both museum administrators and funders.
 - Formative evaluation of interactive toolkit will include: prototype testing of the interface for usability and content relevance.
 - All components will become part of an interactive DVD, which will include images of the research study and full documentation of each of the interactive galleries. An outside consultant, Suzy Watts, will conduct the formative and summative evaluation of the toolkit.

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4. A “tool-kit-launching” event: This may be scheduled during a national conference such as AAM (American Association of Museums) or NAEA (National Art Education Conference) –to reach the broadest audience. The tool kit will also be available for download on the Institute for Learning Innovation’s website to assure broad dissemination and accessibility. The partner museum websites will include project descriptions and links to the Institute’s website. The marketing plan for the tool kit further includes extensive mail and email announcements, articles in professional newsletters and journals, and numerous conference presentations.

Validity, reliability, and generalizability: Validity and reliability for both studies have been carefully considered in the research design. Instruments will either be time-tested from the field or, if created by the Institute, reviewed by the field and sufficiently pilot-tested to assure reliability and validity. Inter-rater reliability rates will be closely monitored in the coding of qualitative responses in both studies. Member checks and family meetings will verify interpretive themes and patterns.

Population validity for both studies is addressed through the random selection of participants for the Large-Scale study and the purposeful selection of families for the Longitudinal study. Ecological validity is addressed through the full disclosure of the data analysis, study findings, and instruments in the toolkit to allow professionals to examine the validity of our conclusions and to replicate the study for themselves. The multiple data sources in both studies allow for triangulation of findings, also strengthening validity. To account for the effect of time on learning, both studies use time-sampling. In the Large-Scale study, a sub-sample of family visitors will be invited to reflect on their learning both at the museum and several months after the visit via an online survey. In the Longitudinal study, families are followed for 12 months, for a clearer picture of how the interactive gallery experience is integrated into the larger realm of family learning.

Finally, establishing learning outcomes for intergenerational museum visitors through a national consensus is a very strong factor in establishing validity. This process will give practitioners clear learning frameworks to guide their practice. Researchers, in turn, can use these outcomes to establish content validity for their ongoing work.

4. Project Resources: Budget, Personnel, and Management Plan

This project was developed by a team of highly qualified professionals. Personnel and their roles are outlined in the following chart: Resumes of principal personnel are also included in the proposal.

Staff Name	Qualification & Commitment	Project Responsibility
Anne Henderson	Director of Education, the Frist Center for the Visual Arts; M.A. Art History; 22 years in museum education; 7 years current position; developed & planned ArtQuest gallery 5% commitment each year for 3 years (Total 32 days over 3 years)	Project Director; Supervise grant administration, attendance at working conference and all core team meetings; review conference position paper, study report; develop “how-to” & advocacy part of tool kit; participate in dissemination activities
Melissa Certo	Art Quest Educator, the Frist Center for the Visual Arts; B.S. Mass Communication; 6 years museum education; oversees operations, & supervises ArtQuest gallery educators, interns, volunteers 3% commitment each year for 3 years (Total 18 days over 3 years)	Attendance at working conference and all core team meetings; review conference position paper, study design and protocols, and final report; on-site supervisor of evaluation assistant; develop “how-to” & advocacy part of tool kit; participate in dissemination activities
Jennifer Mason Chalos	Sponsorships and Grants Manager, the Frist Center for the Visual Arts; M.A. Education in Institutional Advancement; 12 years event & project management 3% commitment each year for 3 years (Total 18 days for 3 years)	Primary contact/grants administrator; assure all reports are submitted to IMLS on time

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Shannon Schuirmann	Administrative Assistant for Education, the Frist Center for the Visual Arts; B.A. Art History; 10 years administration experience 2% commitment each year for 3 years (Total 12 days over 3 years)	Coordinates project activities, assist Frist staff as needed in the management of the grant
Patricia Rodewald	Eleanor McDonald Storza Chair of Education, High Museum of Art; M.A. & M.F.A. Art History; 18 years museum education, 7 years curatorial work & university professor 2% commitment each year for 3 years (Total 12 days over 3 years)	Attendance at working conference and all core team meetings; review of conference position paper, final report, and tool kit; attendance at final workshop/launching event
Julia Forbes	Head of Museum Interpretation, High Museum of Art; M.A. Art History & Museum Studies; 19 years museum education; developed & maintains current family gallery 5% commitment each year for 3 years (Total 38 days over 3 years)	Attendance at working conference and all core team meetings; review conference position paper, study design and protocols, and final report; on-site supervisor of evaluation assistant; develop “how-to” & advocacy part of tool kit; participate in dissemination activities
Cynthia Moreno	Curator of Education, Speed Art Museum; M.A. Arts Administration; 25 years museum education; conceived & implemented ArtSparks 2% commitment each year for 3 years (Total 12 days over 3 years)	Attendance at working conference and all core team meetings; review of conference position paper, study report, and tool kit; participate in dissemination activities
Bryan Warren	Family Programs Director, Speed Art Museum, MFA, 11 years museum education; oversight of family programs and Art Sparks gallery 5% commitment each year for 3 years (Total 38 days over 3 years)	Attendance at working conference and all core team meetings; review conference position paper, study design and protocols, and final report; on-site supervisor of evaluation assistant; develop “how-to” & advocacy part of tool kit; participate in dissemination activities
Marianna Adams	Senior Research Associate, Institute for Learning Innovation, M.A. Art Education, Ed.D. Education Policy; 12 years research & development; 8 years museum education; 8 years elementary, secondary, & university teaching 30% of time commitment for 3 years (Total 215 days over 3 years @ \$1,000/day)	Co-Principal Researcher Develop & monitor project work plan & time line; assist in literature review, develop & present at working conference; organize core team meetings & partnership communication; write conference position paper, develop study design and protocols, train evaluation assistants, monitor data collection, data analysis, write final report; manage evaluation assistants; assemble tool kit; develop & implement marketing plan, organize final dissemination activities
Jessica Luke	Senior Research Associate, Institute for Learning Innovation; MA Museum Studies; Ph.D. Human Development (expected completion 2007, dissertation on family learning); 10 years research and development of museum learning, focus on family learning and youth development in museums; 2 years	Co-Principal Researcher Oversees ethics, secures IRB approval; Conduct literature review, develop and present at working conference; attend all core team & internal planning meetings; write conference position paper, develop study design and protocols, train evaluation

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	museum education 24% of time commitment for 3 years (Total 167 days over 3 years @ \$1,000/day)	assistants, oversee data collection, data analysis, write final report; manage evaluation assistants; edit tool kit; advise on marketing plan, attend final workshop/ launching event
Beverly Sheppard	Executive Director, Institute for Learning Innovation; M.A. Art; 14 years museum administration; 4 years Acting & Deputy Director for IMLS 2% of time commitment each year for 3 years (Total 15 days over 3 years @ \$1,000/day)	Team Advisor: Attendance at working conference, internal ILI planning meetings, and core team meetings; review of conference position paper, study report, and tool kit; attendance at final workshop/launching event
3 Full-time Evaluation Assistants	3 Evaluation Assistants, 1 in residence at each partner museum site, to be recruited, hired, & trained by Institute researchers; Qualifications: Masters degree or commensurate experience in related field 100% of time; \$30,000/year with 28% fringe x 3 assistants x 3 years = \$345,600	Attendance at all core team meetings; Attendance at all training sessions; Collect & organize all data at assigned museum site as directed by Institute researchers; enter data into appropriate data analysis software program; complete initial coding of open-ended data
Susy Watts	Education Evaluation; 4% of time commitment each year for 3 years (Total of 10 days over 3 years @ \$800/day)	Toolkit Evaluator: Review of tool kit design & content; develops & analyzes data from written survey instrument for web-based toolkit; conducts interviews with practitioners on usefulness of toolkit; submits evaluation report to core team

Each participating institution has committed significant resources to the development and implementation of family learning galleries. The Institute for Learning Innovation is a premier research institution, studying the nature of learning in museums. The principal researchers for this project are senior researchers with the Institute with more than twenty years of experience between them. Their work has been conducted in some of the most prestigious art museums in the country, including the partner museums as well as such institutions as the Los Angeles County Museum of Art, the Houston Museum of Fine Arts, the Museum of Fine Arts, Boston, the Isabella Stewart Gardner Museum, the Walker Art Museum, the Dallas Museum of Art and many others.

Project Budget & Cost Sharing: The total cost for all phases of the research project plus administrative overhead is \$1,084,606 across three years: The cost breakdown includes: Planning, core team meetings, and costs for 3 research assistants at each museum site - \$500,132; National consensus conference - \$102,240 of which all this cost is cost sharing; Large-Scale Study – \$135,000; Longitudinal Study – \$105,000; Dissemination/Tool Kit Development - \$140,000; Administrative cost (15% of direct costs of project) for Frist Center - \$42,196. In total \$323,508 (30%) of the costs of this project are supported by cost sharing by the four partners. Cost sharing includes staff time, all costs of the national consensus conference, travel, materials; meeting costs, research assistant overhead and costs for the post-study dissemination and launching event. A total of \$761,098 is requested from IMLS in support of the research project.

Project Benefits: This project has an array of benefits for the partner museums, the Institute for Learning Innovation and the museum field. The potential impact of the research findings for the field has been well detailed above. In addition to these benefits, partner museums will lay the groundwork for future professional learning collaborations, build capacity for conducting ongoing research and evaluation, have an extraordinary opportunity to connect theory to practice, and will establish themselves as leaders in innovative practice. The Institute for Learning Innovation will add to its extensive work on intergenerational learning and its capacity to build deeper understandings and informed practice across the museum field.

Decision Making Process & Collaborative Communication Strategies: The project partners have a long history of collaboration and professional exchange with each other. Many have worked together directly and served on the same professional committees. All have extensively explored together the goals and objectives for this project. A well-honed collaborative history is already in place. The partners have engaged in conversations and meetings on this project for over 18 months and have worked together to establish the project's scope and purposes.

Some task division has already been established. The Frist Center will be the fiscal agent, monitoring the budget and grant deadlines. The Institute researchers will create the detailed work plan, incorporating agreement on partner responsibilities, deliverables, and due-dates. A formal face-to-face core team meeting will occur annually. Multiple planning sessions will occur via live web video-conferencing, telephone conference calls, and email. A password-access area of the Institute's website will be devoted to this project. All documents, data, photos, and audio segments will be stored on this site for easy access by all partners.

5. & 6. Dissemination and Sustainability

Dissemination will be undertaken by all partners. The multi-media tool kit will be available for download on the Institute's website, and 2,000 DVD copies will be available for distribution by mail and at national conferences. In addition, the tool kit marketing plan will include mail and email press releases describing the project and announcing the availability of the tool kit. The marketing plan includes a formal workshop to launch the tool kit. The workshop, held in conjunction with a major museum conference, will allow professionals an opportunity to explore the tool kit and talk with core team partners. Also, partners will submit proposals to present findings at such national conferences as AAM & NAEA allowing for a professional dialogue about the findings. Finally articles will be prepared for a variety of audiences, including family-focused magazines, practitioner-focused newsletters, and peer-reviewed academic journals.

The tool kit will be available from the Institute's website for at least 10 years after the end of the project. Location on the website as well as publication of the project in a variety of journals will assure that relevant literature reviews will connect to this the study in web searches. In addition, the three partner museums will apply findings to the effectiveness of their sites and integrate ongoing evaluation into core museum practices. The learning from the project will inform the future research agenda for family learning, by building conversations, shared findings and more deeply committed professionals within the field. As the seminal research in this area, the study will influence practice for years to come.

References

- Adams, M., & Luke, J.J. (2005). *From heart to head to hand: A synthesis of issues and strategies raised at the Form Content to Play Symposium*. Paper presented at the J. Paul Getty Museum Symposium, "From Content to Play: Family-Oriented Interactive Spaces in Art and History Museums," Los Angeles, CA.
- Adams, M., & Stein, J. (2004). *Formative evaluation for the LACMA Lab nano exhibition*. Unpublished technical report. Annapolis, MD: Institute for Learning Innovation.
- Ash, D. (2003). Dialogic inquiry in life science conversations of family groups in a museum. *Journal of Research in Science Teaching*, 40(2), 138-162.
- Borun, M., Chambers, M., & Cleghorn, A. (1996). Families are learning in science museums. *Curator*, 39(2), 123-38.
- Borun, M., Dritsas, J., Johnson, J., Peter, N., Wagner, K., Fadigan, K., Jangaard, A., Stroup, E., and Wenger, A. (1998). *Family learning in museums: The PISEC perspective*. Philadelphia: The Franklin Institute Science Museum.
- Crowley, K. & Callanan, M. (1998). Describing and supporting collaborative scientific thinking in parent-child interactions. *Journal of Museum Education* (Special Issue on Understanding the Museum Experience: Theory and Practice, S. Paris, Ed.), 23, 12-17.
- Crowley, K., Callanan, M.A., Jipson, J., Galco, J., Topping, K., & Shrager, J. (2001). Shared scientific thinking in everyday parent-child activity. *Science Education*, 85(6), 712-732.
- Ellenbogen, K.M., Luke, J.J., & Dierking, L.D. (2004). Family learning research in museums: An emerging disciplinary matrix? *Science Education*, 88(1), S48-S58.
- Handwerker, W.P. and S.P. Borgatti. 1998. Text Analysis: Qualitative and Quantitative Methods. In H. Russell Bernard, Ed., *Handbook of Methods in Cultural Anthropology*. Walnut Creek, CA: AltaMira.
- Luke, J.J., & Stein, J. (2005). *The Family Learning Project Year 1 Evaluation, Cincinnati Art Museum*. Unpublished technical report. Annapolis, MD: Institute for Learning Innovation.
- Wetterlund, K., & Sayre, S. (2003). *2003 art museum education programs survey*. Retrieved from <http://www.museum-ed.org>.

