



National Leadership Grants for Museums

Sample Application MG-10-15-0079-15
Project Category: Learning Experiences

National Art Education Association

Amount awarded by IMLS:	\$499,804
Amount of cost share:	\$102,617

Attached are the following components excerpted from the original application.

- Abstract
- Narrative
- Schedule of Completion

Please note that the instructions for preparing narratives for FY2016 applications differ from those that guided the preparation of FY2014 and FY2015 applications. Most obviously, the names of the three narrative sections and the order in which they appear have changed. Be sure to use the narrative instructions in the FY2016 Notice of Funding Opportunity for the grant program and project category to which you are applying.

Impact of Art Museum Programs on Students

ABSTRACT

The National Art Education Association (NAEA), in partnership with the Association of Art Museum Directors (AAMD), proposes to conduct the first major national study in the United States on the impact of single-visit programs to art museums on K-12 students. Focusing on children in grades 5-8, this research-based project will qualitatively and quantitatively explore how engaging directly with original works of art within the distinctive physical setting of art museums nurtures skills and capacities among a series of interrelated domains—cognitive, experiential, affective, social, and academic. The study will focus on six geographically-diverse museums in the U.S. and 240 classrooms in their communities, engaging approximately 3,600 students. Data and results from this study will produce evidence not available elsewhere that reports on the effects of single-visit field trips to art museums on students. This new knowledge will be useful for art museum educators; CEOs, directors, trustees, and other museum leaders; formal and informal education communities; funders; educational policy entities; and the media.

A three-year comprehensive assessment process led NAEA and AAMD to identify the need for this study. NAEA's Research Commission gathered information from art and museum educators about their priorities for research, leading it to identify student learning as a key study area. Through working sessions and focus groups, NAEA's Museum Education Impact Framework drew input from NAEA members and other key stakeholders, including K-12 art administrators, educators, and researchers, cultural policy scholars, and funders. In 2013, a task force defined the study's scope and secured funding for a planning year, currently underway.

Building on this planning phase, the IMLS project will be carried out over three years. In year one, the project team will finalize the design of the research study, complete the literature review, design and test research protocols, select sites for testing and study, secure IRB approvals, and finalize instruments and research plans. In year two, the project team will secure parental consents, conduct pre-intervention tests, and carry out data collection and processing of the study sample of six selected museums and associated classrooms and students. In year three, the project team will analyze the data, develop and disseminate a final report, write a "User's Guide" to the results, and hold a symposium at the Detroit Institute of Arts.

The immediate intended outcomes of the project are a rigorous research study that generates and analyzes significant amounts of generalizable data from multiple types of art museums and communities about the benefits of single-visit art museum programs for children in grades 5-8; widely disseminated results which stimulate public and field-wide discussion about the value of art museums to young people; and advocacy tools to key constituencies that articulate the value of art museum programs, support research-based decisions about practice and policy, and identify new questions for research. Long-term, the project's benefits to the museum field are to increase public understanding about the value of art museums as sites for learning and discovery; stimulate new research to deepen understanding of outcomes from art museum experiences; change perceptions in the educational research community by positioning art museums as viable and willing research sites and partners; and empower key stakeholders to advocate for the value of art museum education.

The project's principal research partner, Randi Korn & Associates, will implement a mixed-methods study, including quantitative and qualitative measures, to measure and evaluate the data generated under the program, including standardized questionnaires, interviews, and program observations. In addition, NAEA will evaluate progress against the intended outcomes by tracking project milestones, engaging and receiving feedback from an external Advisory Group throughout the project, and monitoring participating museum sites, schools, teachers, and parents. At the end of the project, NAEA will survey NAEA members, especially museum educators, to determine whether the project caused changes in attitudes toward research and its applications to their practice, and compare this with baseline surveys. NAEA will also survey all symposium attendees to measure the extent to which the final report, "Users' Guide," and symposium provide tools to apply the results within their practice and to use these results to demonstrate the benefits of art museum education.

Impact of Art Museum Programs on Students

1. Project Justification

Art museums offer unique aesthetic, contextual, and social settings for exploration and human understanding.¹ The National Art Education Association (NAEA), in partnership with the Association of Art Museum Directors (AAMD), seeks to build field-wide knowledge and understanding about the potential of art museums as places where learning and discovery happen. We propose to conduct the first major national study in the United States on the impact of single-visit programs to art museums on K-12 students. Focusing on children in grades 5-8, we will qualitatively and quantitatively explore how engaging directly with original works of art within the distinctive physical setting of art museums, during guided programs that use constructivist pedagogies, might nurture a series of skills and capacities among a series of interrelated domains—cognitive, experiential, affective, social, and academic.² The study will focus on six geographically-diverse museums in the U.S. and 240 classrooms in their communities, engaging approximately 3,600 students. Results from this study will produce evidence not available elsewhere that reports on the effects of single-visits to art museums on students.

Over the course of three years, we will achieve these performance goals:

- Design and implement a rigorous research study that generates and analyzes significant amounts of generalizable data from multiple types of art museums and communities about the benefits of single-visit art museum programs for school children in grades 5-8;
- Publish a literature review that contextualizes the study;
- Design and apply research methodologies to demonstrate that experiential, affective, social, and cognitive domains, which are intrinsic to art education and art museum education, can be rigorously studied;
- Widely disseminate results, stimulating public and field-wide discussion about the value of art museums;
- Provide advocacy tools to key constituencies that articulate the value of art museum programs, support research-based decisions about practice and policy, and identify new questions for research.

Long-term, the intended results of the project are to:

- Increase public understanding about the value of art museums as sites for learning and discovery;
- Stimulate new research to identify the range of outcomes resulting from art museum experiences;
- Change perceptions in the educational research community, positioning art museums as viable and willing research sites/partners; and
- Empower key stakeholders, including museum leaders and museum educators; members of formal and informal education communities; policymakers; funders; and those in the media, to advocate for the value of art museum education.

Strategic Context and Audiences Served

Impact of Art Museum Programs on Students is the first project to emerge from a broad strategic research framework established recently by NAEA. In its 2011-2014 Strategic Plan, NAEA committed itself to advancing research and knowledge generation. This, in turn, led to the establishment of a Research Commission in 2012 and the development of a Research Agenda in 2014, which includes student learning as one of four factors to investigate. Concurrent with these, NAEA led the process of developing the National Visual Arts

¹ Ron Ritchard, “Cultivating a Culture of Thinking in Museums,” *The Journal of Museum Education* 32 (Summer 2007):137 – 154 and Levent, Nina and Alvaro Pascual-Leone, *The Multisensory Museum: Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space* (Lanham, Maryland: Rowman & Littlefield Publishers, 2014).

² Camille A. Farrington et al., *Teaching Adolescents to Become Learners. The Role of Noncognitive Factors in Shaping School Performance: A Critical Literature Review*, Raikes Foundation Report (Chicago: The University of Chicago Consortium on Chicago School Research, June 2012): 2 and 325, accessed July 31, 2014

[http://raikesfoundation.org/Documents/Teaching%20Adolescents%20to%20Become%20Learners%20\(CCSR%20Literature%20Review%20June%202012\).pdf](http://raikesfoundation.org/Documents/Teaching%20Adolescents%20to%20Become%20Learners%20(CCSR%20Literature%20Review%20June%202012).pdf).

Standards, released in 2014. The *National Core Arts Standards*³ provide a comprehensive and unified process for guiding quality visual art education for students in grades Pre-K through high school. *The Standards* encompass key components of museum-based learning, including perceiving an artistic work, analyzing and interpreting works of art, and relating artistic ideas and works with social, cultural, and historical contexts to deepen understanding. These new standards have the potential to reframe art education and call for tools to authentically measure the impact on students of all educational efforts in the visual arts.

Also starting in 2011, the NAEA’s Museum Education Division developed an Impact Framework to address one of many strategic questions that museums and art educators face: *what are the benefits of art museums to people?* (See Supporting Doc 1.) The project we propose to IMLS reflects this Framework, which calls for studies designed to explore the value of people engaging directly with original works of art within the context of museums as learning institutions. *Impact of Art Museum Programs on Students* will serve six constituencies or beneficiaries, identified under the Framework: 1) art museum educators; 2) CEOs, directors, trustees, and other museum leaders; 3) formal and informal education communities; 4) funders; 5) educational policy-related entities; and 6) the media. By increasing knowledge and understanding among these, we seek to heighten art museums’ capacity to empower students through experiential learning and discovery and advance the field’s ability to provide high-quality, inclusive educational opportunities that address the needs of the K-12 audience.

Needs Addressed

The decision to focus this first study on K-12 art museum education is strategic. Given that investment of resources in K-12 art education from schools, cultural organizations, and federal, state, and local agencies is significant, but contested and uneven,⁴ we have chosen to focus on single-visit programs that take place during the school day—the most prevalent type of program that art museums offer schools.⁵ While some art museums have evaluated their K-12 programs, most remain unpublished and, to date, only a handful take a field-wide approach and are rigorous. When the IMLS and the Arts Education Partnership (AEP) joined forces in 2013 to expand the body of knowledge on how museums and libraries support youth development through arts programs, the project’s consultants found little. The AEP’s research database artsedsearch.org, currently features only eight studies related to K-12 learning in art museums; nearly all focus on multi-visit programs and school-museum partnerships rather than more typical single-visit programs.⁶ In September 2013, the journal *Education Next* published the results of the only large-scale study to date that applied an experimental design to research the impact of school field trips on students in grades K-12. Focusing on experiences at one site—the Crystal Bridges Museum of American Art—researchers from the University of Arkansas found that field trips have significant benefits for students; impact was highest for students from small towns, economically disadvantaged communities, minority students, and students on their first visits to the Museum. Given these results and the gap in research in art museum education, the time is right for a NAEA-AAMD national study.

When cultural, civic, and government leaders try to explain the value of art museums, they often report revenue growth, economic impact, participation rates across demographic segments, or academic test scores, among other instrumental measures. While important, these data points do not address the intrinsic benefits of art museums to individuals and communities. As a result, the broad public continues to perceive art museums as leisure sites and supplemental rather than fundamental to human development. The landmark report *Gifts of the*

³ <http://nationalartsstandards.org/>

⁴ In 2009-10, 83% of public elementary schools and 89% of secondary schools offered instruction that was designated specifically for visual arts. See <http://nces.ed.gov/pubs2011/2011078.pdf>

⁵ Preliminary results from a national survey by RK&A as part of the Planning Year of the project proposed to IMLS indicates that 97% of art museums offer single-visit programs for K-12 students.

⁶ See http://www.artsedsearch.org/advanced-study-search?category_types%5B3%5D%5B%5D=19&category_types%5B4%5D%5B%5D=31&category_types%5B16%5D%5B%5D=all&category_types%5B23%5D%5B%5D=158.

Muse (2004) by McCarthy et al.⁷ and a 2011 report by the President’s Committee on the Arts and the Humanities both identified a gap in the evidence available about the value of arts and arts education.⁸ The proposed national NAEA-AAMD study has the potential to reframe the argument by adopting a comprehensive and integrated approach that places intrinsic benefits from museum experiences at the center of the discussion.

Furthermore, the cultural sector competes within a highly dynamic knowledge economy, calling for art museums to become data-driven “learning organizations.” A recent article published by Grantmakers in the Arts underscored this: “In order for arts organizations to survive and thrive in the knowledge society requires a new way of thinking and operating. The increasing scope and amount of information available to people and organizations have reached a level where many organizations cannot keep up. It is no longer effective to make decisions based solely on a combination of anecdotal information, intuition, and speculation.”⁹ Art museum directors and AAMD leadership understand that to effectively function, one of their most pressing needs is to build museums’ capacity to rigorously research visitor experiences and generate evidence that can withstand intense scrutiny from the educational research and policy communities. Recognizing that most art museums lack substantial research capacity, the NAEA-AAMD study leverages the combined power of two national associations to address the need for rigorous research and provide a collaborative model for the future.

We believe this study, which will explore a range of cognitive, experiential, affective, social, and academic factors, will have broad implications for formal and informal education. Competing in a global knowledge society has led leaders in government, civic, business and cultural arenas to recognize the importance of what they, in the past, have termed “soft-skills.” Creativity and innovation, critical thinking and problem-solving, communication, and collaboration—areas this project will explore—are now considered essential, along with flexibility and adaptability, initiative and self-direction, and social and cross-cultural skills.¹⁰ The art education field has posited that quality visual art education provides opportunities for students to develop these capacities.¹¹ We now seek evidence that demonstrates whether single-visit programs benefit students in these areas. With data in hand, art museums may be in a stronger position to influence the American educational system—an urgent national priority that has recently led, for instance, to the creation of college and career-ready standards and changes in the guidelines proposed by the U.S. Department of Education to inform its discretionary spending. These priorities acknowledge the importance of so-called “non-cognitive” outcomes to lifelong learning and echo student capacities we seek to explore through this study.

Needs Assessment Process

A comprehensive assessment process, conducted over three years, led NAEA and AAMD to identify the need for this study. In 2010 and 2011, representatives from AAMD met with U.S. Department of Education leaders in Washington D.C. Officials advised that to support and recognize museums for their educational efforts, museums needed to provide better evidence of their impact, as museum research tended to be anecdotal and ad hoc. This guidance influenced the development of NAEA’s Museum Education Impact Framework, along with input from NAEA members and other key stakeholders. Additional focus groups with K-12 educators were held during the 2012 NAEA convention and data were systematically documented by Randi Korn & Associates (RK&A), a nationally-recognized consulting firm specializing in museum planning, research, and evaluation. During this time, NAEA’s Research Commission queried art and museum educators about their priorities to

⁷ McCarthy, Kevin F. et al. *Gifts of the Muse: Reframing the Debate About the Benefits of the Arts* (Santa Monica, California: RAND Research in the Arts. Commissioned by The Wallace Foundation, 2004), accessed August 24, 2014, http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG218.pdf.

⁸ *Re-Investing in Arts Education: Winning America’s Future Through Creative Schools* (Washington, D.C.: President’s Committee on the Arts and the Humanities, May 2011), accessed July 31, 2014, <http://www.pcah.gov/resources/re-investing-arts-education-winning-americas-future-through-creative-schools>.

⁹ Vakharia, Neville, “The Knowledge-Centric Arts Organization: A Critical Role for Grantmakers,” *GIA Reader*, Seattle, Washington: Grantmakers in the Arts 24, (Fall 2013), accessed November 24, 2014, <http://www.giarts.org/article/knowledge-centric-arts-organization>

¹⁰ Partnership for 21st Century Skills, *Framework for 21st Century Learning*, <http://www.p21.org/our-work/p21-framework>

¹¹ National Art Education Association, Position Statement on 21st Century Skills and Visual Arts Education http://www.arteducators.org/about-us/Position_Statement_on_21st_Century_Skills_-_Adopted_April_2010;_Reviewed_March_2013-.pdf

inform its Research Agenda, leading it to identify student learning as a study area. In 2013-2014, members of the NAEA Museum Education Division defined the scope of the study, forming a Task Force in fall 2013. (See Supporting Doc 1.) The Task Force interviewed several researchers to inform plans, created a formal request for research proposals, and supported NAEA in securing funding for a planning year, now under way through a grant from The Samuel H. Kress Foundation. The Task Force reviewed six proposals, narrowed the selection to two finalists through a competitive process, and selected RK&A as research partner. (See Supporting Doc 2.)

2. Project Workplan

The core activity during the three-year period will be a large-scale national impact study that explores the benefits of single-visit programs to art museums to students in grades 5-8. NAEA and AAMD will disseminate and generate discussion about its results by publishing the final report and distributing it to key constituencies, creating an accompanying “User’s Guide” to the results, and organizing a symposium.

2.a. Project Activities and Sequence

Year 1: Research Development. NAEA will finalize contracts with a Project Manager and Randi Korn & Associates. (See section 2.d. and Supporting Doc 2.) We will select sites for testing and study, test research protocols developed during the Planning Year (2014-2015), secure IRB approvals, and finalize instruments and research plans. A session during the NAEA convention will engage researchers and art and museum educators with issues raised by the project; it will also build anticipation for the results and their application.

Year 2: Data Collection and Processing. We will first secure parental consents and conduct a pre-intervention test with students and teachers. We will then focus on data collection at the six geographically distributed museums selected and their related schools. The last trimester will consist of data processing and analysis as well as professional learning activities in tandem with NAEA’s Research Commission, including a 2016 convention session and virtual gatherings. AAMD will also organize a discussion among its members. Advisors and Core Team will convene to discuss emerging results and plan for dissemination, including the symposium.

Year 3: Analysis and Reporting. RK&A will analyze the data and develop the final report; the Core Team will plan dissemination roll-out with input from Advisors. The final report will be released on the NAEA’s and AAMD’s websites, accompanied by media releases and promotion to key constituencies. Core Team members will write a “User’s Guide”; finalize plans for the symposium; and promote both. The symposium at the Detroit Institute of Arts and initial assessment of dissemination activities will conclude Year 3.

2.b. Activities Underway During Planning Year (2014-2015)

A Planning Year began on August 1, 2014 and will end July 30, 2015 with support from the Samuel H. Kress Foundation. The research team of RK&A will:

- complete a literature review;
- conduct a national survey of the field to define characteristics of the most prevalent single-visit field trip practices in art museums and program elements of different single-visit programs across the U.S.;
- interview stakeholders from among the 5 other project constituencies, beyond museum educators;
- identify, hone, and operationalize the student skills and capacities that this study will explore;
- establish criteria for site selection;
- design the instruments to be used during the study; and
- identify Institutional Review Board requirements.

Reporting to Deborah Reeve, Executive Director of NAEA, a Core Team of volunteer museum educators who are NAEA members are leading this Planning Year in close collaboration with AAMD. The group communicates regularly with RK&A and periodically seeks input from a Working Group of eight additional art museum educators representing NAEA’s geographic regions and range of art museum types, sizes, and

communities (See Supporting Doc 1.) For example, this group convened in New York City in October 2014 to identify program characteristics and student outcomes to be included in the proposed plan and national survey.

2.c. Research Plan

We intend to explore how students benefit from engaging directly with original works of art within the distinctive physical setting of art museums and through constructivist pedagogies in single-visit programs. We hypothesize that, though short in duration, single-visit programs affect students in complex, multi-dimensional ways; there is not one direct effect, but rather potentially multiple, interrelated effects that are central to the education of young people. Ultimately, we hope to explore how single-visit programs affect students' skills and capacities across several interrelated areas: 1) critical thinking, 2) creative thinking, 3) affective/sensorial response, 4) human connections/empathy, and 5) academic development. (See Supporting Doc 3.)

The selection of these five areas is based on previous research and evaluation, input from museum educators from across the country, as well as theoretical writings. While one could make a compelling argument that single-visit programs benefit student in these five areas, much of it is based on small amounts of data, evaluation studies of specific programs, studies of multi-visit art museum programs, or studies in contexts other than the museum (schools, for example). Our primary research questions are:

- What are the benefits to 5th-8th grade students when they engage with original works of art within the context of art museums through facilitated, object-based single-visit programs?
- To what extent and in what ways does this type of program affect 5th-8th grade students in their 1) critical thinking, 2) creative thinking, 3) affective/sensorial response, 4) human connections/empathy, and 5) academic development (as defined in Supporting Doc 3)?
- How does the relationship among these five areas manifest in a single-visit program?
- What other patterns and benefits emerge from the data?

Relevance of Proposed Research for Current Practice

A literature review conducted during the Planning Year of this project, which currently includes over 55 sources, demonstrates the relevance of this study. This review reveals that there is a dearth of research on single-visit museum programs. With the exception of the recent impact study at the Crystal Bridges Museum of Art, what exists neither adequately addresses art museum settings nor the intrinsic benefits of these programs. DeWitt and Storksdiack's (2008) review of school field trips notes the challenge of researching the benefits of a brief educational intervention.¹² They argue that the primary value of a field trip is not necessarily to teach complex concepts and facts that may link to the curriculum; rather, museums can have affective benefits, such as "opportunities for exploration, discovery, first-hand and original experiences." The relevance of non-cognitive factors in education is gaining traction. Education Secretary Duncan (June, 2014) proposes new priorities in education, including supporting students' mastery of non-cognitive behaviors so that they develop and attain skills necessary for success in school, career, and life.¹³ A literature review by Farrington, et al. (2008) clarifies that others recognize that non-cognitive factors support learners' maturation. The authors argue for broadening understanding of these factors by looking "beyond individual-level skills to consider the ways students interact with the educational context... and the effects of these interactions on students' attitudes, motivation, and performance" (p. 2).¹⁴ This NAEA-AAMD project will contribute to this body of research.

Museum scholars' and researchers' thinking about learning aligns with Farrington's and Secretary Duncan's. Hooper Greenhill (2000) explores the meaning of objects in everyday life and emphasizes the importance of

¹² DeWitt, Jennifer, and Martin Storksdiack, "A Short Review of School Field Trips: Key Findings from the Past and Implications for the Future," *Visitor Studies* 11, no 2 (2008): 181-97.

¹³ Duncan, Arne. Secretary's Proposed Supplemental Priorities and Definitions for Discretionary Grant Programs. RIN: 1894-AA04, Federal Register Number: 2014-14671. Vol. Federal Register, Vol. 79, No. 12, Notices, 2014.

¹⁴ Farrington, Camille A., et al, "Teaching Adolescents to Become Learners."

bodily experiences of objects (p. 113).¹⁵ This theory of interrelationship and of the role of sensory perception in museum experiences is supported by neuroscience, as demonstrated by many authors in *The Multisensory Museum* (2014).¹⁶ Scholar Olga Hubard concludes that museum education would benefit from the kind of research NAEA-AAMD proposes: “If the skills at hand can be developed in inquires across fields and in daily life, what, then is the distinctive value of inquires into works of art? What might students gain from these experiences, beyond the development of the skills germane to all inquiries?” (p. 176).¹⁷

Research Methods and Design

To examine the research hypothesis, the project’s principal research partner RK&A proposes a mixed-method study, featuring an experimental pretest-posttest control-group design along with qualitative inquiry. Within the selected sites, classrooms will be randomly assigned to one of three study groups, defined below. We will target a limited range of grade levels (grades 5-8) to reduce variables effecting student outcomes, and we will ensure schools across the groups reflect comparable characteristics in terms of socio-economics, arts access, etc., enabling rigorous research.

1. Treatment Group A – students who attend a facilitator-led, single-visit program in an art museum where they engage with original works of art through close looking and response (including group dialogue).
2. Treatment Group B – students who engage in a museum-facilitated classroom program that replicates the facilitator led-single visit program with these exceptions: students engage with two-dimensional reproductions of works of art in a classroom.
3. Control Group – students who do not attend a single visit program in an art museum or classroom.

The research plan proposes a mixed-methods study, including quantitative and qualitative measures. Methods proposed are 1) standardized questionnaires, 2) open-ended interviews (part scored on a rubric, part analyzed qualitatively), and 3) program observations. Quantitative data will enable RK&A to collect responses from many individuals and conduct a statistical analysis of the data. Findings from qualitative data will allow results to emerge and may help explain the quantitative data results. (See Supporting Doc 3 for full research plan.)

Selection of Research Sample

The sample will be selected to limit variability and strengthen internal validity of the national research study. During the Planning Year (2014-2015) we will identify criteria to select seven museums across the country (one museum will serve as a test site), and then select three to five schools near each museum to meet our sample size. Classrooms will be randomly assigned to one of three comparison groups.

Sample selection will be informed by a survey of the field now underway. RK&A and the Core Planning Team collaboratively designed a survey to identify prevalent trends in the practice of single-visit programs in the United States. We created a database of nearly 600 art museums from AAMD, American Alliance of Museums, Association of Academic Museums and Galleries, and NAEA. Museums in this database are diverse in size, type, and location, including all 50 states, the District of Columbia and Puerto Rico, and range in budget size from under \$500,000 to over \$200,000,000. A survey link was emailed to the 600 museums in November 2014.

Survey results will inform site selection and sampling. The seven selected museums will meet these criteria:

- Have “typical” single-visit programs
- Serve an adequate number of students in the target grade range to meet sampling quotas
- Represent geographic diversity (one museum from each of six geographic regions)¹⁸

¹⁵ Hooper-Greenhill, Eilean, “Objects and Interpretive Processes,” in *Museums and the Interpretation of Visual Culture* (London and New York: Routledge, 2000), 103–23.

¹⁶ Pallasmaa, Juhani, “Museum As Embodied Experience” in *The Multisensory*, 239-49.

¹⁷ Hubard, Olga M., “Illustrating Interpretive Inquiry: A Reflection for Art Museum Education,” *Curator* 54 (April 2011): 165–79.

¹⁸ The six geographic regions, as determined by AAMD, are: Mid-Atlantic, Midwest, Mountain Plains, New England, Southeast, and Western.

- Vary in size (small, medium, and large museums according to budget and FTEs)
- Represent variety of community types where museum is located (rural, urban, suburban, etc.)

School selection will be based on student population—that is, schools that serve students who have similar demographics and socioeconomic characteristics (not yet determined). To limit variability and strengthen internal validity, the sample may include: students in two or three grade levels (grades 5-8), with similar scores on state-wide standardized tests, and in schools with demographically and socio-economically similar student body profiles. A total of 240 classrooms will comprise the final study sample (approximately 3,600 students) across communities represented by six museums. Following acceptable educational research procedures, RK&A will analyze the student data by classroom and treatment/control group.

Human Subjects Protection

We will abide by all school district policies in regard to human subject protection, including securing Institutional Review Board (IRB) and school district permission/approval. IRB-approved permission letters will be sent home to the parents of participating students for signature and returned to the researcher. All data will be confidential and anonymous.

Data Collection

By April 2015, RK&A will design data collection tools, including standardized questionnaires, interview guides, and observation guides. During Year 1 of the IMLS project, RK&A will select a test site—one museum and one to two schools it serves—and pre-test instruments and protocols for reliability and validity and revise accordingly. The instruments, described below, will be implemented in Year 2.

Students

- A standardized questionnaire will measure aspects of the skills and capacities (such as critical thinking and academic development). It will also include demographic questions, attitude-rating scales, and other questions to examine variables that may affect students' experiences in single-visit art museum programs. The questionnaire will include close-ended (e.g., multiple choice questions and scales) and open-ended questions. Students in the control and two treatment groups will complete identical questionnaires.
- Open-ended interviews will examine the complex aspects of the student skills and capacities. Interviews encourage individuals to describe their experiences, express their opinions and feelings, and share with the interviewer the meaning they construct from an experience. The audio-recorded and transcribed data will be analyzed in two ways—some interview data will be scored on a rubric and other parts will be analyzed via content analysis. A sample of students in the control and both treatment groups will be interviewed. (See Supporting Doc 3 for full research plan, including explanation of the scoring rubric.)
- Observations will capture observable skills and capacities as they happen in real-time (e.g., sensorial and affective responses). Observations will also assess similarities and differences of the programs as context for analysis. Observations will capture quantitative and qualitative data from both treatment groups.

Other

- A standardized questionnaire will be administered to all teachers to capture background information (e.g., number of years teaching, association with the arts, whether students study art in school).
- Open-ended interviews with program facilitators in both treatment groups will contextualize student data.

Data Analysis and Reporting of Findings

Data collection will produce quantitative and qualitative data. RK&A will statistically analyze all quantitative data (i.e., questionnaires, some observation data, and rubric-scored interview data). Other interview and observation data will be analyzed qualitatively. Qualitative data is studied for meaningful patterns, and similar data will be grouped together, assigned a name to convey the meaning, and presented as verbatim interview

quotations and observation excerpts. A final report, to be published and disseminated by NAEA and AAMD, will present research findings through interpretive text, tables, and visualizations.

Data Management Plan

All data will be confidential and anonymous. Individual subject data will be identified by ID numbers and maintained by RK&A. Data will include audio files, transcriptions, and hand-recorded observation and questionnaire data. All data will be stored at RK&A's office in password-protected files/computers and/or in locked cabinets. NAEA and AAMD will receive all digital data and retain the rights to data and data collection instruments. Two years after the project is complete, RK&A will destroy all paper data, as required by the IRB.

2.d. Oversight, Management, Resources, and Evaluation

Oversight

NAEA and AAMD have signed a Cooperative Partnership Agreement (see Supporting Doc 4) detailing their responsibilities toward the project, including fiscal management; contracting; data sharing; and planning roles.

Management and Personnel

Deborah B. Reeve, as NAEA's Executive Director, will monitor strategic management and alignment with NAEA priorities, provide oversight over all financial arrangements and agreements, including contracts, and ensure fulfillment of all responsibilities articulated in the Agreement with AAMD. NAEA will leverage its operational approach for this project: keeping intact its lean staff of 12, it will scale up capacity both by mobilizing its volunteer member group of museum educators (led by the Project Director) and by contracting a Project Manager to support project activities (see below for details).

Emily Holtrop, NAEA Museum Education Division Director, will serve as **Project Director**, liaising with Reeve and NAEA's Board; leading the Core Team; and managing project administration, implementation, and internal and public communication, with administrative and program support from the Project Manager.

A **Core Team** will leverage field knowledge and engagement as we advance specific phases of the project.

- *Andy Finch*, Director of Policy, AAMD, will serve as AAMD Liaison, carrying out partner responsibilities outlined in the Agreement with NAEA.
- *Barbara Bassett*, The Constance Williams Curator of Education, School and Teacher Programs, Philadelphia Museum of Art (PA), will chair the Research Strategy and Dissemination Group. This group will provide input to RK&A during the study's design, implementation, analysis, and reporting phases, ensuring that the field's needs are addressed. The group will also write the "User's Guide."
 - *Michelle Grohe*, Director of School and Teacher Programs, Isabella Stewart Gardner Museum (MA), and *Wendy Wolf*, Learning Programs Manager, Vizcaya Museum and Gardens (FL) will be part of the Research Strategy and Dissemination Group.
- *Jennifer Czajkowski*, Vice President, Learning and Interpretation, Detroit Institute of Arts and Museum Education Division Representative, NAEA Professional Learning Through Research Working Group, will chair the Professional Development and Dissemination Group, with assistance from Grohe and additional volunteer museum educators that will be identified at a later time. The group will plan professional learning opportunities as part of NAEA conventions and via digital platforms; organize the symposium; and assist Finch in planning discussions with museum directors and other stakeholders.

The Project Director will convene an **Advisory Group** up to twice a year. Advisors will offer technical and strategic input to NAEA staff, researchers and Core Team members on the plan, methods, results, and dissemination. Confirmed are *George Hein, Ph.D.*, leading expert in museum education; *Danielle Rice, Ph.D.*, former art museum director and now on the faculty at Drexel University; *Angela Fischer*, Omaha Public Schools Art Supervisor; and *Jennifer Novak-Leonard, Ph.D.*, arts and cultural researcher and policy advisor.

Sree Sreenivasan, Chief Digital Officer at the Metropolitan Museum of Art and journalism expert has been invited. (See Supporting Doc 5 for Advisor bios.)

NAEA will contract **Randi Korn & Associates (RK&A)** to lead the research. The RK&A team includes *Randi Korn*, Founding Director; *Stephanie Downey*, Managing Director; and *Amanda Krantz*, Senior Associate. *Olga Hubbard, Ph.D.*, Associate Professor of Art Education at Teacher's College, Columbia University and *Brian Kisida*, Senior Research Associate in the Department of Education Reform at the University of Arkansas will serve as technical consultants. The team was selected for their extensive experience with museum-based research, capacity to design and conduct a large-scale study, their expertise in qualitative and quantitative impact research; and their understanding of art museum education issues. (See Supporting Doc 2.)

A contract **Project Manager** will provide administrative and communication support to the Project Director and Core Team and facilitate implementation between NAEA-AAMD, RK&A, museum sites, and schools. The Project Director, Core Team, and RK&A will hold monthly virtual meetings. Bassett and the Research Strategy and Dissemination Group will communicate with the RK&A team at least monthly. The Professional Development and Dissemination Group will also communicate regularly (more frequently in years 2 and 3). All will gather annually during NAEA's convention to ensure strategic coordination and critical discussion.

Resources

As described in the Budget Narrative, we estimate that \$604,541 is needed to implement this project over a three-year period, of which IMLS funds make up \$499,804 and NAEA cost-share of \$104,737. We request IMLS funds to cover RK&A's and the Project Manager's contractual fees, including travel. Given that project activities will require significant time from museum educators and AAMD staff, we request honorarium support to their organizations for half of their time dedicated to the project and select travel costs. IMLS funds are also requested for honoraria and travel for Advisors and select travel for the Project Manager. Finally, grant funds would cover fees to museum sites for components of the research, and for supplies and travel for Reeve, Core Team members, and Advisors to participate in the symposium. Symposium attendees will pay a registration fee, not included in this proposal, which will cover meals and other expenses. As an in-kind cost-share, NAEA will contribute staff support and technical assistance as well as meals during meetings. Museums, NAEA, and AAMD will subsidize part of the personnel time on this project and fund their travel to attend annual meetings.

Evaluation

The core activity of this project is research and evaluation of the data collected and processed from the sample group. In addition, NAEA will monitor and evaluate overall progress of the project by tracking milestones and deadlines; listening to Advisory Group feedback as well as NAEA-AAMD member input collected during conference sessions and other means; ensuring that participating museum sites, schools, teachers, and parents are supportive and engaged; and making mid-course adjustments as necessary. At the end of the project, NAEA will survey NAEA members, especially museum educators, to determine whether the project caused changes in attitudes toward research and its applications to their practice, and compare this with baseline surveys. NAEA will also survey all symposium attendees to measure the extent to which the final report, "User's Guide," and symposium provide tools to apply the results within their practice and to use these results to demonstrate the benefits of art museum education. We will also track and measure media interest in the project's results. (See below, Project Results, for more detail on evaluation measures.)

3. Project Results

Given that the core activity of this project is a research study that will take place over the course of nearly three years, significant changes in skills, behaviors, and/or attitudes among the key stakeholder groups remain a long-term goal. Within the project period, we expect to affect our key constituents in specific ways.

Fostering a culture of research among art educators is a primary NAEA goal. Results from an association-wide survey that will be administered during the Planning Year by the Professional Learning Through Research Working Group of the Research Commission will provide a baseline of NAEA members. At the end of the project, NAEA will again survey its members, especially museum members, to determine whether the project caused changes in attitudes toward research and its applications to practice. For instance, did the project heighten museum educators' interest in research? Did professional learning activities related to the project provide them with opportunities to engage in research-related discussions? We will survey all symposium attendees to gauge whether the final report, symposium, and related "User's Guide" provided them with tools to apply the results and to use the results to demonstrate the benefits of art museum education. Indicators of success for the symposium include securing an at-capacity audience; the audience should include a mix of participants from among all six project constituencies. Such measures will tell us that we are on the path toward the long-term goal of empowering stakeholders to advocate for the value of art museum education.

This project aims to increase public understanding about the value of art museums as sites for learning and discovery. One of the most important indicators of potential long-term impact during the project period will be whether the results receive national, local, and regional coverage through major media outlets.

Other important long-term goals include influencing perceptions in the education research community about the viability of art museums as worthwhile sites for research. Acceptance of a session at a conference organized by a professional education organization will serve as an indicator of progress toward the end of the project period.

The project seeks to inform practice and stimulate new research. Important markers will be to publish the literature review during the project period, submit a proposal to a peer-reviewed publication for a research article about the study and its results, and submit to AEP's research database the final report. By disseminating the methodology as well as the results, we will provide a model for future research and demonstrate that "soft skills" that are intrinsic to art museum education and other forms of art education can be studied rigorously.

The Project leadership and advisory structure is designed to ensure maximum impact by enabling us to translate and present the project and its results in targeted ways to each of the core constituencies. *Museum educators* will seek to apply the research results to their practice, including decisions concerning program design and pedagogy, and concrete communication strategies. *CEOs and museum leaders* will want a one-page summary and talking points as well as a strategy with roll-out instructions for their Communications officers. For this group, the results can provide powerful data for advocacy and fundraising, resource allocation, and messaging. For the *formal and informal education communities*, results will influence the case for art education and inform program decisions related to partnerships between organizations and schools. *Funders*, public and private, increasingly rely on data to guide decision-making; study results could influence funding priorities and approaches. *Policy-related entities* may shift organizational attitudes and policies based on the results, helping to advance our vision that art museums are part of the educational infrastructure of the United States and that research dollars are needed for informal learning research. Finally, the *media community* will benefit, as results will bring nuance to the community's understanding about the value of art museums and offer a opportunity to present and debate activities directly related to an urgent national priority—education.

By building knowledge and public understanding about the value of art museums as places for learning and discovery for young people, this project may increase support for educational policies and programs that provide access and equity for all K-12 students. The sustained benefits of the project lie at the heart of the respective missions of NAEA and AAMD: to fulfill human potential and promote global understanding through the power of visual art education, and to increase the contribution of art museums to society.

