

1. STATEMENT OF NEED

The Dallas Museum of Art (DMA) has a long tradition of serving teachers in the Dallas and greater North Texas community through professional development opportunities, teaching materials, internships, outreach, and collaborative development of classroom curriculum. In addition, high level staff positions within the Education Division, Director of Learning Partnerships and the Head of Teaching Programs, are dedicated to these initiatives.

The development of high-quality teaching materials is among the most significant aspects of the Museum's service to teachers. Based on works of art from the DMA's collection and exhibitions, thirty online resource units have been designed for teachers to use as learning aids in K-12 classrooms and as resources for the general public before, during, or after their visit (DallasMuseumofArt.org/StudentsandTeachers). While these resources contain extensive information and activity suggestions, they could be greatly enhanced by the addition of dynamic, collections-based digital media and reformatted to allow for easy updating (**see Other Attachments for sample DMA teaching materials content**). The DMA has experimented with new formats for special exhibition teaching materials and can extend these experiments by collaborating with teachers to convert and redesign the Museum's web-based teaching materials.

The proposed project, *Connect: Teachers, Technology and Art (Connect)*, focuses on the development, in collaboration with teachers, of a model for converting, producing, and delivering dynamic, web-based teaching units for classroom use. Deeply aligned with the DMA's mission to "champion the power of art," "educate the community," and "contribute to cultural knowledge," *Connect* will incorporate results from a 2007 study on how teachers learn and teach with works of art, newly published research on the DMA's African and South Asian collections, and technology made possible through the DMA Arts Network, a system that effectively and efficiently creates and delivers content to onsite and online visitors. The project will connect teachers and—as secondary audiences—students and the public with the DMA's African and South Asian works of art (**see Other Attachments: Overview of DMA Collections – African and Asian Collections**).

Since 2002, the DMA has worked with Randi Korn & Associates, Inc. on an ongoing research project — Levels of Engagement with ArtSM (LoEA)— a study focused on learning about visitors' preferences for types of interpretation and programming, comfort with looking and talking about art, and enthusiasm and passion for art. Recognizing that teachers are a key audience, in 2007 the DMA conducted a study with 450 Dallas area K-12 teachers within the context of LoEA. Results from this study describe teachers' varied learning and teaching preferences and will serve as a basis for the development of online materials for teachers (**see Other Attachments: "Levels of Engagement with ArtSM Teacher Study"**). When asked to rate among five approaches to using works of art in the classroom, all teachers—no matter what the level of teaching, level of engagement with art, or discipline—rated "I use works of art to explore cultures from around the world" the highest. The DMA's decision to focus on teaching materials related to the new research on the African and South Asian collections aligns well with this LoEA study result.

Consider the new DMA's African publication, which showcases 115 objects from the collection chosen for both their visual appeal and compelling stories about their purpose. African art serves a purpose as an agent of religion, social stability, or social control. The works of art in the DMA's collection are presented under the themes of leadership and status, the cycle of life; decorative arts, and influences (imported and exported), and are accompanied by photographs that show the context in which they were used. Imagine a collaborative session between education staff and K-12 teachers focused on the development of an African online teaching unit about human connection themes in African art such as "leadership" or "life after death." Together, they consider great works of art like the cast bronze plaque of an oba, or king, from the Edo Kingdom of Benin, Nigeria and a brass and copper-clad wooden *Janus reliquary guardian figure* from Gabon that communicates ideas about funerary practices. Collaboratively, they select contextual images, information, and multimedia components to shape a unit serving teachers' varied approaches to teaching world cultures through works of art.

The Arts Network is the DMA's plan to use technology to connect the broadest audience with great works of art in diverse and creative ways. The Museum-wide system features an effective program development process and adaptable delivery system. The Arts Network, funded by IMLS, will be completed in 2009 and will make possible the creation of a template for building dynamic teaching units that will have the potential to be replicated by other museums and cultural organizations, regardless of size.

Once completed, the DMA will deliver five redesigned, tested, and evaluated teaching material units based on works of art in the African and South Asian collections that better address the ways teachers teach and learn. Based on current usage, the DMA anticipates that these units will reach 5,000 teachers annually. In the future, the development and production process established to complete these teaching units will provide a model for assessing, redesigning, and evaluating the Museum's other 25 existing units and inform the creation of new units. The DMA's educational resources will be accessible to a vastly larger audience through user-friendly technology.

Through *Connect*, the DMA will serve teachers and students in the Dallas Independent School District (DISD includes approximately 160,000 students representing the following demographics: 65.3% Hispanic, 28.7% African American, 4.8% White, 1.0% Asian, and 0.2% American Indian) as well as other North Texas districts and schools around the nation. *Connect* will:

- Provide art and cultural content about African and South Asian works of art;
- Address teachers' ways of learning and teaching with works of art;
- Present free, reliable high-quality educational experiences online;
- Assure effective learning within the classroom context through collaboration with teachers.

Using *Connect*, an elementary teacher without an art history background, but fascinated with the DMA's Chola bronze sculpture of Shiva Nataraja, is supported in his LoEA preference to teach about works of art through music and dance using teaching materials that feature a video clip of a Hindu dancer teaching the symbolic content of the Indian sculpture. A Stupa displayed in the Buddhist galleries comes to life for a world history class, as the teacher encourages students to listen to audio clips of a contemporary Buddhist monk telling stories about the symbolism and function of the object. Imagine a high school art teacher teaching about world cultures through a focus on technique and materials, her LoEA preferred teaching approach. Using the new African teaching materials, she directs her students to an online interactive component based on recent X-ray images of Standing male figure with nails, a great African Power Figure from the Democratic Republic of the Congo, that reveal what may be magical materials held within the figure's belly pouch.

Connect supports goals central to the Museum's strategic plan. **Education for Life** is one of three long-range goals of the DMA Strategic Plan. The Museum commits resources to: 1) engage the Dallas and North Texas community in arts experiences throughout their lifetime; 2) create a learning environment that actively engages learners in experiences with art; and 3) capitalize upon new technologies to increase access to information about the Museum's collections (**see attached Strategic Plan Summary**).

DMA staff worked collaboratively with the Board of Trustees and representative leaders and organizations from the community to develop and implement its strategic plan, approved in 2000. Components of the strategic plan include operating budget benchmarks through 2010, capital campaign goals, a new mission statement and branding initiatives, a building master plan, a five year education plan (2005-2010), and development of a nationally acclaimed exhibition schedule. Progress toward goals is reviewed quarterly by the Executive Committee and full Board. The annual operating budget is carefully aligned with the strategic plan, and attendance has grown from 371,000 in 2001 to over 500,000 in 2008. Today, one out of every two visitors participates in an education program.

The DMA serves the fast-growing and diverse North Texas region, a nine-county urban area with a total population of approximately 6.2 million people. The Museum plays a critical role in preservation, interpretation, and transmission of cultural ideas and themes related to its encyclopedic collection for the public's enjoyment. *Connect* will fulfill the goal of the Museums for America "Engaging Communities" grant program by strengthening the Museum's ability to serve teachers through audience engagement and collaboration and maximizing the educational impact of programming through the creation of digital content. Additionally, the Museum will have a practical, cost-effective, and efficient solution for converting and developing digital educational content and delivering it to a broad spectrum of interested audiences.

2. PROJECT DESIGN

The DMA staff's extensive experience in developing educational programming and digital projects equips it to manage the planning, development, and dissemination of *Connect*. The project director will lead *Connect* through four phases, working closely with a project supervisor and project manager (**see attached Schedule of Completion**). DMA Multimedia and Information Technology, Curatorial, Collections, and Education staff, as well as an Educational Software Consultant will complete the project team. Two panels of ten teachers each will be compensated to serve as project collaborators and representatives of classroom teachers. Teachers will be selected based on varying levels of LoEA, disciplines taught (art and non-art teachers), and school districts served. The DMA's onsite Manager of Visitor Studies and Evaluation will be engaged from the beginning to develop and maintain evaluation plans. Open communication among team members and weekly meetings will ensure the timely completion of all project activities and allow opportunities for revisions.

The goals for *Connect* are to:

- Apply the Levels of Engagement with ArtSM Teacher Study to the re-creation and redesign of online teaching materials
- Organize existing and new content focused on the African and South Asian collections and integrate this content into the Content Management System (CMS) to enhance public and staff access with particular emphasis on the development of the five new teaching material units
- Develop five new dynamic, innovative online teaching material units based on the rich content of the Museum's African and South Asian collections for use by approximately 5,000 teachers annually and potentially from around the world
- Develop a practical and efficient model for building dynamic, template-based teaching materials and freestanding content that will have the potential to be replicated by other institutions
- Empower DMA education staff to manage content and create new teaching materials through training them in relevant technology applications

Phase I: Plan & Assess, October 1, 2009 - March 30, 2010

Focus on initiating project and identifying and organizing all digital content.

- Develop project plan, finalize evaluation plan, and hire Project Coordinator
- Identify digital content: audio, video, text, images in current teaching materials, new African and South Asian catalogues, and archived multimedia assets
- Hire Collections Technician to integrate digital content into the Content Management System (CMS)
- Form Teacher Panel I and interview teachers to learn more about their preferences for learning and teaching with works of art
- Visit classrooms and observe teachers using existing teaching materials related to African and South Asian collections

Phase II: Develop, Test, & Train, April 1, 2010 - September 30, 2010

Focus on initiating and testing templates for the five teaching material units.

- Complete integration of digital content
- Conduct interviews with teachers following classroom visits and integrate information into collaborative sessions focused on design of teaching materials templates
- Develop use-case scenarios, requirements, and design plan for teaching materials templates
- Develop and test prototype templates in classrooms and collect feedback
- Refine prototypes and create wireframes
- Begin training Education staff in CMS applications to use templates and create teaching materials

Phase III: Build & Refine, October 1, 2010 – March 30, 2011

Focus on refining teaching materials templates and populating templates with content.

- Form Teacher Panel II (who share LoEA and demographic similarities with Teacher Panel I)
- Complete usability testing with Teacher Panels I and II
- Develop plan for integration of new teaching material units into student and teacher section of the DMA Web site
- Build teaching materials templates in CMS
- Train Education staff to repopulate templates with digital content
- Visit classrooms and observe teachers (Teacher Panel II) using new teaching materials related to African and South Asian collections
- Refine teaching materials templates and complete building
- Present at National Art Education Association Conference spring 2011

Phase IV: Launch, Review, & Disseminate, April 1, 2011 – September 30, 2011

Focus on completion of the project, dissemination of project materials, and reporting.

- Populate templates with digital content and launch five new units on the Student and Teacher section of the DMA Web site
- Implement communications plan
- Review project goals, process, and outcomes with project team and Teacher Panels I and II
- Develop future plan for redesign of 25 additional existing teaching materials units and new teaching materials
- Present project at Visitor Studies Association in summer 2011 and submit papers for the 2012 Museums and the Web and American Association of Museums conferences
- Write project report

Evaluation Plan: The DMA's extensive LoEA research provides a foundation of information about museum users, and the recent LoEA research on teachers is at the core of *Connect*. The Manager of Visitor Studies and Evaluation will work with the project team to refine projected outcomes and develop the evaluation plan. Evaluation strategies for the project include: 1) interviews; 2) user observations; 3) prototype testing; 4) staff and teacher feedback sessions; and 5) usability testing done in collaboration with the Education Software Consultant. The majority of evaluation strategies are focused on formative techniques providing iterative opportunities and assuring staff that the end products will effectively serve the users (teachers). The Evaluator and the Consultant will develop instruments, procedures, and documentation that inform project decisions and maintain progress toward fulfilling outcomes.

Communications Plan: Dissemination of project results during and after the grant period to teacher audiences and other institutions will occur through the annual Student & Teacher Programs brochure sent to 10,000 educators, the quarterly DMA *Magazine* publication sent to 25,000 member households, quarterly educator email blasts, teacher workshops and programs, and the DMA Web site. The project team will also present and submit papers for the National Art Education Association, Visitor Studies Association, Museums and the Web, and American Association of Museums conferences.

Scholarly Involvement in Project: Dr. Roslyn Walker, The McDermott Curator of African Art and Senior Curator of the Arts of Africa, the Americas, and the Pacific Islands, and Dr. Anne Bromberg, The Cecil and Ida Green Curator of Ancient and South Asian Art, organized recent research and catalogue publications on their collections that will serve as content for the development of the teaching materials. Outside scholars that contributed to the South Asian catalogue include: **Dr. Frederick Asher**, Professor of Art History at the University of Minnesota, specializing in Indian Art; **Dr. Catherine Asher**, teacher and researcher focused on art from the Islamic world; **Dr. Nancy Tingley**, former Paul L. and Phyllis Wattis Curator of Southeast Asian Art at the Asian Art Museum in San Francisco, currently a freelance curator; and **Robert Warren Clark**, consultant to the Himalayan Department at the Asian Art Museum of San Francisco and Curator of the Bernard-Murray Collection of Tibetan Art and Artifacts at the University of California, Berkeley.

3. PROJECT RESOURCES: TIME, PERSONNEL, BUDGET

The Dallas Museum of Art is committing 5,160 hours of staff time from its education, curatorial, information technology, and collections departments, 3,680 hours of new nonpermanent staff, and approximately 250 hours of consultant time to *Connect*. The total cost of *Connect* is \$303,940. Of this amount, \$153,940, or 50.6 %, is non-federal cost share that includes contributions of DMA staff time. We are requesting the remaining \$150,000 from IMLS (see attached Detailed Budget – Year 1 and Year 2, Budget Summary, and Budget Justification).

Project Team (see attached Project Staff and Resumes)

Gail Davitt, Dallas Museum of Art League Director of Education, will supervise the project team and assist in managing the budget and completion of the project. She was NAEA 2004 National Museum Educator of the Year.

Nicole Stutzman, Director of Learning Partnerships with Schools and the Community, as project director, will oversee collaborative work with teachers, design teaching materials, and repopulate content into teaching templates. She will also drive dissemination of the project through conferences and marketing as well as plan the application and integration of grant activities into long-term plans for the conversion of all teaching materials.

Jenny Marvel, Manager of Learning Partnerships with Schools, as project manager, will play a key role in the identification and organization of existing content from non-western teaching materials and new curatorial and multimedia content. She will also be a member of the team designing new teaching materials templates.

Sharisse Butler, Manager of Visitor Studies and Evaluation, will create the evaluation plan and oversee all aspects of implementation including interviews, classroom observations, formative testing, data analysis, and reporting.

Molly Kysar, Head of Teaching Programs, is responsible for the quality of teaching in the Museum and will assist with the selection of teachers for the panels and participate in the collaborative work with teachers.

Homer Gutierrez, Information Technology Director, will consult on technical aspects of the project, ensuring that the project is consistent with the DMA's long-term technology goals. He will ensure that the project meets with industry standards with the goal of sharing with other organizations.

Jessica Heimberg, Senior Web Developer, will serve as lead programmer, manage the development of code, technically integrate content, supervise metadata creation, and conduct software and application training.

Ted Forbes, Multimedia Producer, will develop dynamic templates, act as the lead developer of multimedia components, assist with training, and provide technical assistance in the areas of production.

Dr. Roslyn Walker, The McDermott Curator of African Art and Senior Curator of the Arts of Africa, the Americas, and the Pacific Islands, will provide insight about works of art and cultural content related to the African collection. She has completed the research and writing for the new African catalogue.

Dr. Anne Bromberg, The Cecil and Ida Green Curator of Ancient and South Asian Art, will provide insight about the works of art and cultures in the South Asian collection included in the redesigned teaching units. She has completed research for the South Asian collections catalogue and was a contributing author.

New Staff (see attached Project Staff and Resumes for Job Descriptions)

Part Time Project Coordinator will be hired to coordinate and document team meetings, assist with scheduling teacher panels, process formal analysis, and support project development.

Collections Records Technician will be hired for twelve months (April, 2010 – March, 2011) to digitize textual information from object files related to the African and South Asian collections.

Consultants (see attached Project Team and Resumes and Other Attachments for Project Proposal)

Karen Self, Education Software Developer, will work with the project team to design, code, and test web applications, and participate in all aspects of the software development lifecycle. Self is currently assisting the Senior Web Developer as a consultant for the IMLS-funded Arts Network.

4. IMPACT

The short- and long-term impact of *Connect* on the anticipated 5,000 teachers will be understood through the following:

Products and Deliverables: The most significant deliverable will be **five redesigned, evaluated, web-based classroom teaching units about works of art in the African and South Asian collections** using updated and new multimedia components and collections research and information. These units will be loaded into the Arts Network framework: the Content Management System (CMS), The Museum System (TMS), and the DMA Web site and tagged with appropriate metadata, which will make these resources available for use by other non-teacher audiences who visit the DMA Web site (DallasMuseumofArt.org).

Formal project documentation could potentially provide another organization with a blueprint for organizing a similar project. Documentation will include: 1) a formal project plan; 2) technical specifications; 3) source code; 4) training materials; and 5) a formal report about the team's collaboration with teachers in the teacher panels, classroom visits, and program development and evaluation. In addition, members of the project team will submit papers for presentations at National Art Education Association, Museums and the Web, Visitor Studies Association, and American Association of Museums conferences. As required, the Dallas Museum of Art will also plan to submit interim and final narrative and financial reports, including copies of all documents when completed.

Measurable Project Outcomes: Projected outcomes focus on the quality of teacher experiences with the redesigned teaching units in their classrooms. Using observations and interviews, we will measure the differences between what the first-panel teachers initially do with the existing materials in the classroom and what the second-

panel teachers initially do in the classroom with the revised materials. When using the revised online teaching materials in their classrooms, teachers on the second panel as a group will **use a greater variety of resources from the teaching units**, as well as **use a larger number of resources**. More students taught by teachers on the second panel will be **involved in the classroom discussions**. Teachers on the second panel will have **fewer negative and more positive comments regarding the ease of accessing materials and identifying resources to be used**. They will also express **greater enthusiasm** for and **comfort with the options** of resources they find online. Additionally, a higher number of teachers on the second panel will say that they anticipate **using the other online teaching units in the future** and have **fewer negative and more positive comments regarding the ease of incorporating the materials into their existing curriculums**.

Projected outcomes benefitting the Museum include an increase in staff knowledge, decreases in production time associated with online teaching material units, and an increase in digital assets available to the public about the African and South Asian Collections. During the project review period, the Evaluator will conduct interviews with staff, seeking to identify and describe increases in technology-based skills and knowledge gained for production processes aligned with the Arts Network and through collaborative experiences with teachers. With staff acquiring new knowledge and skills, it is estimated that there will be a 20% decrease in teaching material production time. Furthermore, it is estimated that there will be a 50% growth in digital assets related to the African and South Asian collections made available to teachers and the public via the DMA Web site.

Long Term Impact: Built within the flexible, standards-based framework of the Arts Network, *Connect* has great potential for long-term impact on the DMA's ability to develop and deliver educational programming of the highest quality to students and teachers in North Texas, community partner organizations with similar educational missions, and other arts-interested audiences, especially in the areas of sustainability, program growth, and student learning.

Sustainability: Sustainability is a primary outcome of this project, achieved through training museum staff to use the Museum's Content Management System (CMS) to access and use digital content and through their exploration of new ways to use audience research findings in the development of online teaching materials.

Program Growth: In the design of all teaching programs and content, the DMA Education staff is committed to identifying and implementing innovative concepts and approaches that better connect teachers with works of art and support their classroom use of them as teaching tools. In the future, the Museum will extend the model developed during this grant for building dynamic teaching units to the conversion of the other 25 existing teaching units, as well as the creation of new units.

Student Learning: While the impact of teachers' use of the Museum's teaching materials on student learning in the classroom and during museum visits is not a focus or formal outcome of this project, the DMA fully anticipates that students will substantially benefit from the project, especially in terms of their exposure to the global cultures, ideas, and beliefs represented in the works of art included in these teaching units.

BUDGET FORM: Section B, Summary Budget

	\$ IMLS	\$ Cost Share	\$ TOTAL COSTS
1. Salaries and Wages	\$75,600.00	\$103,615.00	\$179,215.00
2. Fringe Benefits	\$16,500.00	\$25,900.00	\$42,400.00
3. Consultant Fees	\$10,000.00		\$10,000.00
4. Travel	\$5,000.00		\$5,000.00
5. Supplies and Materials	\$6,000.00	\$4,000.00	\$10,000.00
6. Services			
7. Student Support			
8. Other Costs	\$20,250.00		\$20,250.00
TOTAL DIRECT COSTS (1-8)	\$133,350.00	\$133,515.00	\$266,865.00
9. Indirect Costs	\$16,650.00	\$20,025.00	\$36,675.00
TOTAL COSTS (Direct and Indirect)	\$150,000.00	\$153,540.00	\$303,540.00

Project Funding for the Entire Grant Period

1. Grant Funds Requested from IMLS	\$150,000.00
2. Cost Sharing:	
a. Applicant's Contribution	\$153,540.00
b. Kind Contribution	
c. Other Federal Agencies*	
d. TOTAL COST SHARING	\$153,540.00
3. TOTAL PROJECT FUNDING (1+2d)	\$303,540.00
Percentage of total project costs requested from IMLS	49.4 %

*If funding has been requested from another federal agency, indicate the agency's name:

	Phase I Plan and Assess		Phase II Develop, Test, and Train	
YEAR ONE: OCTOBER 1, 2009 – SEPTEMBER 30, 2010				
	OCTOBER – DECEMBER 2009	JANUARY – MARCH 2010	APRIL – JUNE 2010	JULY – SEPTEMBER 2010
ADMINISTRATION				
Hire Project Coordinator				
Team Meetings and Documentation				
TEACHER PANEL(S)				
Finalize Evaluation Plan				
Select Teachers – Panel 1				
Interview Teachers – Panel 1				
Visit Classroom and Observe Existing Teaching Material Use – Panel 1				
Collaborate and Develop New Teaching Material Templates – Panel 1				
NON-WESTERN ONLINE TEACHING MATERIALS				
Identify and Organize Existing Content (existing teaching materials)				
Identify and Organize New Content (catalogue text, images, video, audio, etc.)				
Integrate all content into Museum databases				
Prototype CMS Teaching Material Templates				
Test Prototypes and Refine				
Build CMS Teaching Material Templates				
Train Museum Education Staff on CMS Teaching Material Templates				

	Phase III Build and Refine		Phase IV Launch, Review, and Disseminate	
YEAR TWO: OCTOBER 1, 2010 – SEPTEMBER 30, 2011				
	OCTOBER – DECEMBER 2010	JANUARY – MARCH 2011	APRIL – JUNE 2011	JULY – SEPTEMBER 2011
ADMINISTRATION				
Team Meetings and Documentation				
Project Review and Report				
TEACHER PANEL(S)				
Select Teachers – Panel 2				
Visit Classroom and Observe New Teaching Material Use – Panel 2				
Interview Teachers – Panel 2				
NON-WESTERN ONLINE TEACHING MATERIALS				
Build CMS Teaching Material Templates				
Train Museum Education Staff on CMS Teaching Material Templates				
Convert Content and Populate New Teaching Material Templates				
Test New Teaching Materials and Refine				
DISSEMINATION				
Launch New Teaching Materials on Web				
Communication Plan				
Conference presentations				