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EXAMINING THE ROLE OF MUSEUMS AND LIBRARIES IN STRENGTHENING COMMUNITIES

HEARING

BEFORE THE

SUBCOMMITTEE ON HEALTHY FAMILIES AND COMMUNITIES

COMMITTEE ON EDUCATION AND LABOR

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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EXAMINING THE ROLE OF MUSEUMS AND LIBRARIES IN STRENGTHENING COMMUNITIES

Thursday, September 11, 2008
U.S. House of Representatives
Subcommittee on Healthy Families and Communities
Committee on Education and Labor
Washington, DC

The subcommittee met, pursuant to call, at 9:29 a.m., in room 2175, Rayburn House Office Building, Hon. Carolyn McCarthy [chairwoman of the subcommittee] presiding.

Present: Representatives McCarthy, Clarke, Kucinich, Grijalva, Sarbanes, Platts, and Davis.

Staff present: Tylease Alli, Hearing Clerk; Adrienne Dunbar, Education Policy Advisor; ; David Hartzler, Systems Administrator; Fred Jones, Staff Assistant, Education; Jessica Kahanek, Press Assistant; Deborah Koolbeck, Policy Advisor, Subcommittee on Healthy Families and Communities; Rachel Racusen, Communications Director; Margaret Young, Staff Assistant, Education; Stephanie Arras, Minority Legislative Assistant; Cameron Coursen, Minority Assistant Communications Director; Chad Miller, Minority Professional Staff; Susan Ross, Minority Director of Education and Human Services Policy; Linda Stevens, Minority Chief Clerk/Assistant to the General Counsel; and Sally Stroup, Minority Staff Director.

Chairwoman MCCARTHY [presiding]. A quorum is present. The hearing of the subcommittee will come to order. Pursuant to committee rule 12-A, any member may submit an opening statement in writing, which will be made part of the permanent record.

Before we begin, I would like everyone to take a moment to ensure their cellphones and BlackBerrys are on "silent."

I now recognize myself, followed by the congressman, Mr. Davis, from Tennessee, for an opening statement. I want to begin this hearing by recognizing this important day in American history.

September 11, 2001 changed the life of each citizen, and the course of our nation. We have not forgotten, nor will we forget, the lives lost on that day. We extend our deep gratitude to the first-responders, who sacrificed their health and their lives to help the victims that day.

Our thoughts and prayers go out to the families and friends who lost loved ones in New York, Pennsylvania, and at the Pentagon.

Please join me for a moment of silence in the remembrance of our fallen citizens. [Pause.]

Thank you.

I would like to welcome everyone to this hearing—as another school year gets underway—this hearing is of particular importance. Libraries and museums contribute to the health and the welfare of the community, year-round.

This summer, many of us visited a museum while on vacation, or spent more time in our local library with our children, getting books or participating in programs. This fall, many teachers will engage in museum-based professional development, and students will attend museum programs and libraries that are filled with both teachers and students, busy with schoolwork and research.

I wanted to hold this hearing now because it is a good time for members of Congress to examine the role that both libraries and museums play in strengthening our communities. Libraries not only provide a vast amount of knowledge, ready, available to the community, for free, but they also serve as locations for groups to meet and for people to connect to the Internet.

Community members can also attend workshops and programs addressing everything from cake decorating to workforce development and professional education. Libraries are safe places for our children to go after school and on the weekends, and serve as a place where generations can gather and learn form each other.

Museums serve the community in similar ways. Museums are diverse in their subject and form, and contribute to communities by collecting, interpreting, and preserving items and ideas important to this country and to the world. Museums engage visitors and they ignite the imagination of the young and the old alike.

Part of the challenge of a museum is to store and preserve its collection for future generations to explore firsthand the world of today, and of our past. As with all institutions, libraries and museums evolve over time; for example, what was once card catalogs are now computer databases, searchable from home, on the Internet.

The needs of our communities are also changing. And, thus, the role of libraries and museums must change to serve and strengthen the community in which it resides. In fact, many libraries and museums have seen communities expand through the use of the Internet. Thus, libraries and museum need to be innovative in the ways of serving the community in which a library or a museum resides as a fellow citizen and community member.

Today, we will learn of innovation, creative activities undertaken by libraries and museums to serve communities, as well as to participate in addressing community needs and challenges.

I now would like to recognize Mr. Davis, for his opening statement.

Prepared Statement of Hon. Carolyn McCarthy, Chairwoman, Subcommittee on Healthy Families and Communities

I want to begin this hearing by recognizing this important day in American history. September 11, 2001, changed the life of each citizen and the course of our nation. We have not forgotten nor will we forget the lives lost on that day. We extend our deep gratitude to the first responders who sacrificed their health and their lives to help the victims that day. Our thoughts and prayers go out to the families and friends who lost loved ones in New York, Pennsylvania, and at the Pentagon. Please join me for a moment of silence in remembrance of our fallen citizens.

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For example, what were once card catalogues are now computer databases searchable from home on the Internet. The needs of our communities are also changing, and thus the role of libraries and museums must change to serve and strengthen the community in which it resides. In fact, many libraries and museums have seen communities expand through the use of the internet. Thus, libraries and museum need to be innovative in the ways of serving the community in which a library or a museum resides as a fellow citizen and community member.

Today we will learn of innovative, creative activities undertaken by libraries and museums to serve communities as well as to participate in addressing community needs and challenges.

Mr. DAVIS. Thank you, Madam Chairwoman.

Good morning.

And let me extend a warm welcome to our distinguished panel of witnesses. Welcome.

Before we begin, I would like to take a moment to reflect on the somber anniversary being marked today. Seven years ago, our nation was forever changed by the murderous acts of a band of terrorists, determined to undermine our very way of life.

I am proud of how our nation responded, with selfless acts of patriotism and courage, and a determination to maintain our freedom, and to defeat those who attack our citizens and our values.

As we take this opportunity today to look at institutions that strengthen our communities, we must all remember that those strong communities have stood in the face of terrorism, and maintained the power of the American spirit.

We are here early this morning to discuss the tremendous roles that museums and libraries play in strengthening our nation's local communities. I particularly look forward to hearing from the Institute of Museums and Library Services, who will discuss their support of IMLS programs, and how they assist various museums and libraries with achieving their missions and goals.

Our nation's museums and libraries have, historically, played a vital role in helping society experience, explore, discover, and make

sense of an ever-changing world. Today, their role is more essential than ever.

Through building technology infrastructure and strengthening community relationships, museums and libraries can offer the public unprecedented access and expertise in transforming information overload into knowledge.

In many communities across America, the local library is the only place people of all ages and backgrounds can find and freely use the diverse set of resources, with the expert guidance of librarians. And far too often, the hometown library serves as the only public access to the Internet.

Not to be left out, the treasures of our nation's museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artifacts and specimens, which they hold in trust for our society.

As you know, Madam Chairwoman, I am sitting in today for Mr. Platts. I would like to ask unanimous consent to submit his opening statement for the record.

Chairwoman MCCARTHY. Granted.

[The statement of Mr. Platts follows:]

Prepared Statement of Hon. Todd Russell Platts, a Representative in Congress From the State of Pennsylvania

Good morning. Welcome to our hearing on "Strengthening Community Museums and Libraries."

Almost five years ago, Congress reauthorized the Museum and Library Services Act. This legislation provides federal support for museums and libraries across the country. I believe this law made positive improvements to federal programs for libraries and museums by ensuring coordination between library and museum programs, as well as consolidating smaller programs to increase government efficiency.

I am pleased that we are holding this hearing today to learn more about how the legislation has impacted the Institute of Museums and Libraries. Both libraries and museums provide substantial benefits to the communities in which they reside. Libraries are especially valuable in rural communities in which individuals have less access to research resources. In addition, libraries provide disabled individuals with specialized materials and resources that they may not be able to access elsewhere. Museums ensure that citizens stay connected to their communities by providing opportunities for families to engage in history. I am honored to represent Gettysburg National Military Park, which just opened a new museum featuring artifacts and stories from the Civil War.

I look forward to hearing testimony regarding the innovative ways by which community libraries and museums have provided resources to families across the nation. I also look forward to hearing from Ms. Mary Clare Zales regarding the many library programs across my home state of Pennsylvania.

Finally, I would like to thank our distinguished panel for joining us today and providing us with their insight and first hand experiences with library and museum programs. With that, I yield back to Chairwoman McCarthy.

Mr. DAVIS. Once again, I would like to thank the witnesses for being here to discuss this important topic. I look forward to your testimony.

Thank you, Madam Chairwoman McCarthy. And I yield back.

Chairwoman MCCARTHY. Thank you, Mr. Davis.

Without objection, all members will have 14 days to submit additional materials or questions for the hearing record.

I would like to introduce our witnesses. Today, we will hear from a panel of witnesses.

Your testimonies will proceed in the order that I introduce you.

I would like to introduce our first witness, Dr. Radice—great.

Let me explain something. I just got hearing aids on Monday, so I have got a terrible feedback going into my ears. So I am having problems adjusting to the mic, and to my ears.

She has been the director of the Institute of Museum and Library Services, better known as IMLS, since 2005. She comes to IMLS as a distinguished art and architectural historian, museum professional and administrator. Immediately prior to directing IMLS, she served as acting assistant chairman for programs of the National Endowment for the Humanities.

Among her many other positions, she has served as the first director of the National Museum of Women in the Arts, the only museum in the world exclusively dedicated to displaying works by women of all periods and nationalities. Today, she will give us an overview of the mission and the programs of IMLS, sharing with us how IMLS connects people to information and ideas.

I am proud to introduce our next witness, a constituent of mine, from Long Island, Ms. LeBlanc. She is the director of the Long Island Children's Museum, located in Nassau County. Before coming to Nassau County, she served as executive director of the Discovery Children's Museum in Las Vegas.

Throughout her career she has been a strong advocate for the importance of the arts in the lives of children and families. She is among the 50 most influential businesswomen on Long Island. Today, she will tell us about IMLS, a funded program, where the Long Island Children's Museum has been working with the Nassau County Department of Social Services and Family Court.

Welcome.

Our next witness is Ms. Mary Clare Zales. She was appointed by the governor of Pennsylvania in 2004 to serve as the deputy secretary for libraries at the Pennsylvania Department of Education. In this position, she provides leadership and a vision to school, public and the academic libraries, in meeting the information, education and enrichment needs of all Pennsylvanians.

As deputy, she oversees the state library of Pennsylvania, one of four major research libraries of the state. The state library has recently completed a refocus of its mission, placing an emphasis on its historical collections, and becoming the designated library for Pennsylvania-related materials and resources. Today, she will discuss the activities of libraries to strengthen both rural and urban communities across Pennsylvania.

Next, I will yield to my colleague, Congressman Grijalva, to introduce the next witness.

Mr. GRIJALVA. Thank you so much, Madam Chair, and let me, at the outset, extend my apologies to the witnesses, and to yourself, Madam Chair, for having to leave this meeting. I am chairing a subcommittee meeting that won't be as enlightening and as informative as this one. But I need to be there.

Let me just say that it is an honor for me to introduce our next witness, who is a dear friend of mine and my family's, and a strong community advocate on behalf of neighborhoods, fighting the issue of health disparities, and making education and library services accessible to all.

Annabelle Nunez is from my hometown of Tucson, and my neighborhood. I have to be particularly gracious. She is also the president of our neighborhood association.

She is a graduate of the University of Arizona and the School of Information Resources and Library Science, Knowledge River program—a graduate of that first cohort of students that went through that program. Well, she was a student in the program, and she was actively involved in the recruitment and retention activities for Knowledge River students, served as a peer advisor to other Knowledge River students.

She continues to work with that—mentoring Knowledge River interns. She is a co-advisor and program manager to Knowledge River Student Mentors, who work with Native American and Latino youths in a teen-community health-information institute to explore health-sciences librarianship, and provide community health services.

I think Annabelle's experiences—work—is a shining example of the benefits of investing in our libraries, and working on programs that expand diversity and increase the professional capacity of our libraries. Our community advocacy has increased in different avenues because of her work in Knowledge River.

She currently works at the University of Arizona, Arizona Health Sciences Library, where she works to reduce cultural and financial barriers to a good health and preventive care among Latinos.

I am very proud of her work in our community. I am very proud of the work that the University of Arizona is doing with Knowledge River.

And thank you, Madam Chair, for this opportunity to introduce a constituent, and a friend, to this hearing. And please accept my apology for having to leave the meeting early. Thank you very much.

Chairwoman MCCARTHY. You are quite welcome. Thank you.

Our next witness, Dr. Eric Jolly, comes to us from the Science Museum of Minnesota, where he serves as the first Native American president of that institution. He is also known nationally and internationally for his contributions to mathematics and science education, and is a published author in these areas.

Dr. Jolly also serves on numerous advisory boards, including those for the National Academy of Sciences, the American Association for the Advancement of Science and the National Task Force on Technology and Disability.

Today, he will share with us the work of the Science Museum of Minnesota to strengthen not only the local community, but the state of Minnesota and the nation.

I want to thank you all for being here. Please do not take as an insult that we don't have a lot of members here. As many of you know, there is a memorial service going on at the Pentagon, and most of our colleagues are there.

For those of you who have not testified before the subcommittee, let me please explain our lighting system. In front of you, there is a lighting system that will be green, yellow and red. Members and panelists will have 5 minutes. That will be either questionings or explaining the answers.

When you see the yellow light, please start to look to winding down your testimony. We will probably be a little more flexible; I am, on this committee. We will give you an extra minute or so. But we do want to hear from your testimony.

I already did that.

Please be certain, as you testify, to turn on the mics so that everybody in the audience can hear you.

We now will hear from our first witness.

STATEMENT OF ANNE–IMELDA M. RADICE, DIRECTOR, INSTITUTE OF MUSEUM AND LIBRARY SERVICES (IMLS)

Ms. RADICE. Madam Chairwoman and members of the subcommittee, American libraries and museums are institutions trusted by our local, national and international communities. They are depositories of great treasures, knowledge and centers of learning that engage communities and give stability to our culture.

Today, we pause, and we reflect about horrible events 7 years ago. However, museums and libraries were some of the first institutions that began a process to heal, contextualize and provide forums for dialogue to help us reunite with the world.

Whether through the simple and beautiful connections made between the Louisiana Children's Museum and that of New York, or providing places to just be together, these community institutions engage. They continue, now, to use knowledge and community interaction to battle prejudice and ignorance.

I am proud to serve as the director of the Institute of Museum and Library Services, the primary source of federal leadership and funding for almost 18,000 museums, which range from zoos and aquaria to those that serve art, history and science, and of the over 122,000 libraries.

Through grants, convenings, research and real partnerships with other private organizations and federal agencies, such as the Arts Endowment for the Big Read, or the Humanities Endowment for Picturing America, just to name two of the over 20 real partnerships we have; through innovative initiatives, a lively Web site, activities of an engaged board, our national medal recognition of the best of the best, we have been, and we are strategic in how we expend taxpayer dollars; we expand capacity.

Our administrative operations emphasize accountability and transparency. We expect that of our grantees, and we have to set the example. And during my tenure, I am very proud to say we have clean audits. We have received clean audits.

We encourage learning and innovation. An excellent example is a grant we announced this week to Southern New Hampshire University to establish a digital repository that will provide open worldwide access to the University's research.

The first collection to be digitized will be about building better practices and policies that serve low-income and marginalized communities around the globe. Further, it will provide a replicable model for other institutions, which expand the positives of this project exponentially.

We prepare library and museum professionals for the future. A good example is a grant we just announced for SUNY's Cooperstown Graduate Program. An institute will be created to train the

next generation of museum professionals to be cultural entrepreneurs.

Coursework will be designed to spark innovation and creativity in the planning and execution of all aspects of museum work, and to refine leadership abilities.

Our agency, through strategic leadership, is fostering innovators and innovations to help change the way libraries and museums meet the new challenges in the world. We seek big ideas, and we help those who take leadership roles in their communities and in their professions.

IMLS helps to sustain cultural heritage. When I took office, I acted swiftly to address the significant and alarming trends in the lack of preservation of America's collections. We began a seminal initiative called "Connecting to Collections: A Call to Action."

Well, we called, and American institutions have acted. We were on the ground following the Iowa floods, with help, within 1 day, with partners such as Heritage Preservation and the American Institute for Conservation. And we continue to be there for the Gulf States.

One part of this program is a conservation bookshelf; a set of essential collections, care books and other resources that we have, so far, distributed to over 2,000 institutions nationwide. And I know that they have helped even proactively prepare for the most recent, and continuing, weather changes and challenges.

And that is what we hear in our "Thank You" letters. One letter came recently from Jacksonville, Florida, from the Mandarin Museum and Historical Society. They said to us, "We were able to ascertain quickly what we needed to do to prepare for Tropical Storm Fay.

"There was substantial flooding, as well as a major tree fall, debris and a couple of displaced alligators. But we came through this with our structures and collections intact."

Madam Chairwoman, our goals are ambitious, but appropriately so. And I look forward to answering your questions.

[The statement of Ms. Radice follows:]

Prepared Statement of Anne-Imelda M. Radice, Director, Institute of Museum and Library Services

Madame Chairwoman and Members of the Subcommittee: Thank you for the opportunity to appear before this subcommittee today to report on the Institute of Museum and Library Services and the ways in which it helps museums and libraries strengthen communities.

My name is Anne-Imelda Radice and it has been my privilege to serve as the Director of IMLS since May of 2006. Previous federal positions I have held include Acting Assistant Chairman for Programs at the National Endowment for the Humanities, Chief of Staff to the Secretary of the United States Department of Education, Acting Chairman and Senior Deputy Chairman of the National Endowment for the Arts, Chief of the Creative Arts Division of the United States Information Agency, Curator and Architectural Historian for the Architect of the Capitol, and Assistant Curator at the National Gallery of Art. I was also the first Director of the National Museum of Women in the Arts from 1983 until 1989.

The Mission and Goals of the Institute of Museum and Library Services

The Institute of Museum and Library Services is the primary source of federal support for the nation's 122,000 libraries and 17,500 museums. The impact of our funding reaches into nearly every community in America.

We involve hundreds of library and museum experts from communities across the nation in our stellar peer review process for our competitive awards. And we work in close partnership with every state and the territories to support library services

through a population-based grant to every state. We provide federal leadership that helps institutions connect with the expertise they need to make a difference in their communities.

Each year we make hundreds of grants that go beyond supporting individual projects. We are strategic. By encouraging great projects, innovative ideas, and solid research we are changing the way library and museum services are delivered in the United States.

Our mission is to support these essential institutions in their efforts to connect people to information and ideas, the fundamental purpose of all museums and libraries. In carrying out that mission we have four major goals.

Goal One: Attaining Excellence in Federal Management, Operations, and Service

This first goal is the one that undergirds all the others. The Institute is focusing on its administrative capacity in order to fulfill its statutory grant making, research, evaluation, and policy activities. We continue to implement the consolidation of federal responsibilities for library statistics activities and provide advice on library and information policy. My management team and I are committed to meeting growing expectations to demonstrate accountability. Strategic planning and evaluation, as well as implementation of the President's Management Agenda (PMA), are a priority at the Institute and will enable the Institute to continue achieving high-quality management and performance. I am proud to report that IMLS has received only clean audits since my tenure as Director.

Goal Two: Sustaining Heritage, Culture, and Knowledge

The Institute's second goal is to help sustain heritage, culture, and knowledge. The collections in libraries and museums connect people to the full spectrum of human experience: culture, science, history, and art. By preserving and conserving books, artwork, scientific specimens, and other cultural artifacts, libraries and museums provide a tangible link with humankind's history.

Late in 2005, Heritage Preservation, the national not-for-profit organization dedicated to saving the objects that embody our history, issued the Heritage Health Index, a study funded by IMLS. The findings of the Heritage Health Index were sobering:

- 190 million objects in the United States are in need of conservation treatment.
- 65 percent of collecting institutions have experienced damage to collections due to improper storage.
- 80 percent of collecting institutions do not have an emergency plan that includes collections, with staff trained to carry it out.
- 40 percent of institutions have no funds allocated in their annual budgets for preservation or conservation.

IMLS, which has always supported conservation and preservation activities through conferences, publications, and millions of dollars in grants each year, responded with the Connecting to Collections initiative, or C2C. The purpose of this initiative is to raise public awareness of the importance of caring for our treasures, and to underscore the fact that these collections are essential to the American story. Moreover, through C2C we are providing direct assistance to the collections care efforts of museums and libraries in ways we never had before. The initiative has included a national summit on conservation with representatives of libraries and museums from every state, forums in different parts of the country on different aspects of collections care, statewide planning grants to promote collaborative efforts, and grants of an essential collection of books and other resources on conservation. This Connecting to Collections Bookshelf has been particularly well received. I have received hundreds of heartwarming expressions of thanks.

I will excerpt briefly just a few:

The Pittsburgh Zoo and PPG Aquarium wrote, "We * * * appreciate the resources that help us prepare for emergencies. Our collection contains representatives of 22 threatened or endangered species, and the loss of those animals—some of whom are among the most genetically valuable in American zoos—would be of incalculable harm to the cause of conservation."

Expressing a sentiment echoed by many of the Bookshelf recipients, the curator of the Goldsmith Museum in Baltimore wrote, "Since we are a small museum with a limited budget, this library of resources is one that we could only have dreamed of owning."

It was particularly gratifying for me to read the following from the Mandarin Museum & Historical Society in Jacksonville:

"We received our Bookshelf a couple of days before [Tropical Storm] Fay hit near Jacksonville, Florida. Although we have a disaster plan in place, it is fairly limited * * * Through the Bookshelf, we were able to ascertain quickly what we still needed to do to prepare our museum for the storm. After the storm, our historical park

received substantial flooding, as well as a major tree fall, a sizeable amount of debris, and a couple of displaced alligators. With the guidance of the bookshelf, I am happy to say that we came through the storm with our structures and collections intact."

The collections we are working to protect are the tangible link to every aspect of our culture. They are as significant to the American identity and character as any natural resource. That is why we have made this work such a high priority.

Many IMLS grant programs can support some component of collections care. Conservation Project Support (CPS) is the one that is entirely focused on this area. CPS grants may be used to fund surveys of collections, improvements to environmental conditions, and the treatment of all types of collections, both living and non-living. To be eligible for a grant, the project must be addressing the institution's top conservation priority. Members of the subcommittee might be aware of some of these IMLS grants that have been awarded in recent years.

Goal Two Examples

• The Tucson Museum of Art and History received $66,000 to properly rehouse the museum's collections, which include Mexican folk art and a collection of masks, pre-Columbian textiles, framed works on paper, regional sculpture, and a 50-piece furniture collection.

• The Baltimore and Ohio Railroad Museum was awarded $27,000 to conduct a detailed condition survey of the museum's vast historic paper-based and audiovisual collections, which include motion picture film, videos, sound recordings, photographic prints, slides, transparencies, and glass plate/film negatives related to early American railroading.

• The National Aquarium in Baltimore will use a $150,000 grant to upgrade the Life Support System of its Atlantic Coral Reef exhibit.

• With a $9,000 CPS grant, the Currier Museum of Art in New Hampshire treated the Weare Press Cupboard, the most important piece of New England furniture in the museum's collection.

• The Brooklyn Museum received $80,000 this year to complete Phase I of an Art Storage Master Plan, consolidating existing storage areas, eliminating storage shortages, creating a textile center and viewing area, and transporting the collection of textiles and Asian screens into these newly reorganized units.

• In response to a 2005 tribal resolution, the Big Pine Paiute Tribe of the Owens Valley will establish a museum/cultural center on its reservation in southeastern California. In anticipation of this event, an outside consultant will provide training in collections management techniques and will help draft a collections management policy. The tribe currently has several ethnographic pieces, mainly in the form of baskets, as well as 14,442 archaeological artifacts from excavations on its property that will form the core of the material for the museum/cultural center. In addition, a case in the office if the Tribal Historic Preservation Officer will host an exhibit of material from the Papoose Flat Archaeological District that is on loan from Inyo National Forest. This exhibition will be designed to creatively depict the cultural heritage of the Big Pine Paiute Tribe.

Goal Three: Enhancing Learning and Innovation

The third goal of IMLS is to enhance learning and innovation. Success in today's society requires information literacy, a spirit of self-reliance, and a strong ability to collaborate, communicate effectively, and solve problems. Combining strengths in traditional learning with robust investment in modern communication infrastructures, libraries and museums are well equipped to build the skills Americans need in the 21st century. Libraries and museums bring tremendous learning assets to communities engaged in a wide range of concerns, from workforce issues and parenting to cross-cultural understanding and student achievement. As partners in the exercise of civic responsibility, libraries and museums are part of larger efforts to weave a stronger community fabric.

Much of the work we do at the Institute serves this important goal. Through grants, convenings, and research, we are constantly striving to push the fields of museum and library services in ways that enhance the learning opportunities of all Americans.

Goal Three Examples

• Dr. Patricia Montiel Overall at the University of Arizona, in partnership with Sunnyside Unified School District and Tucson Unified School District, is examining the effect of teacher/librarian collaboration on science information literacy of Latino students. Using qualitative and quantitative methodologies over three years, this study will look at teacher/librarian collaboration in the preparation of science instructional modules for third, fourth, and fifth graders in predominantly Latino ele-

mentary schools. This research will examine questions about the relationship of teacher/librarian collaboration to Latino students' performance on standardized tests of science proficiency and information literacy.

• The Museo de Arte de Puerto Rico partnered with Operacion Exito (OE) to create an Art-Science-Technology Project that to bring to the museum top high school students from low-income areas, providing previously unavailable education opportunities. The project was to develop an enhanced computer lab at the museum through OE, an innovative education initiative in science and math supported by the Puerto Rico Department of Education. Through the enhanced curriculum, students from the Central Visual Arts School will use new learning tools that integrate art and science using new technologies. A key component is the integration of multiple resources at the museum, including use of museum collections, space to engage with other students, and interaction with artists. There will also be teacher workshops to further integrate the museum resources into the curriculum.

• The York County (Pennsylvania) Heritage Trust (YCHT) will develop communications and activities with local educators to facilitate creative methods of teaching history to children in grades four through six. The museum will hire an experienced educator with a working knowledge of Pennsylvania Commonwealth curriculum standards for two years to compile a contact list of educators and education advocates, establish and build a network with schools and educators for future cooperation in lifelong learning activities, increase YCHT visibility in the schools through an electronic newsletter, conduct workshops in which teachers and administrators develop new programming, create and implement a list of traditional and electronic outreach products that schools can use, and publish and distribute an education service guide.

• The Frazier Arms Museum in Louisville will use videoconferencing capability to expand its education resources and provide the local community access to museum activities they would not normally encounter. A collaboration with the British Royal Armouries, this project will serve as a model, demonstrating how, using partnerships and the adaptation of some common technologies, museums can play a vital role in engaging local teachers and students in new learning opportunities.

• The Jonesborough—Washington County (Tennessee) History Museum is a major source of heritage education for this region of southern Appalachia. The objectives of the project are (1) to construct a Storytelling Porch in the museum gallery to provide an engaging and interactive experience for visitors and to achieve greater flexibility for special exhibits, and (2) to tell the story of Jonesborough through interpretive panels, using the National Register Historic District as an outdoor exhibition space and tying specific panels to stories visitors can listen to on the Storytelling Porch. Through this project, the museum aims to make its exhibits more engaging and to make use of the historic downtown as a unique resource for outdoor interpretation.

Goal Four: Building Professional Capacity

The fourth goal is building professional capacity in the museum and library fields. The need for lifelong learning applies to the staff of museums and libraries as well as their users. The Institute places a priority on building leadership capacity to address societal changes by supporting the development of a highly skilled workforce in libraries and museums. The Institute helps to spur innovation, support diversity, and build traditional library and museum service expertise.

Several of the Institute's grant programs address this goal. We have two programs in particular that focus on it exclusively. The Laura Bush 21st Century Librarian program and the 21st Century Museum Professionals program fund projects that anticipate the needs of the next generation of library and museum professionals. These projects recruit and educate new professionals and enhance the training opportunities of those already in the field.

Goal Four Examples

• The University of Arizona School of Information Resources and Library Science recruited 48 Native American and Hispanic students to a master's program in library and information science as part of its Knowledge River initiative. The initiative also involves 12 second-year scholars for the Knowledge River program and 24 Native American and Hispanic high school students in a Teen Community Health Information Institute to explore health sciences librarianship and provide community health services. The Knowledge River program helps students develop valuable skills such as leadership, professional contribution, and community service as well as improve their job preparation and job-seeking skills by providing workshops, community learning experiences, and opportunities to interact with library leaders.

• The Weeksville Heritage Center in Brooklyn has strengthened its institutional capacity by professionalizing its collections practices. As the only museum interpreting African American history in the 19th and 20th century in the Northeast, Weeksville Heritage Center needed to preserve its collections, while identifying ways to use them more effectively in exhibits and programs. IMLS funding supported the creation of a part-time position of Collections Manager, responsible for evaluating the 450 artifacts in the center's collections, developing and implementing a collections management policy, overseeing the initiation of an environmental monitoring system, and collaborating with program staff to utilize collections more effectively in public programming.

• The Cleveland Zoological Society will begin a conservation medicine program to enhance institutional capacity for research, training, and staff development. The program will allow the zoo to better understand the causes of health problems in captive animals through scientific research for improving animal management, health, and welfare. The proposed expansion of the project will support the zoo's veterinary epidemiologist (one who studies factors affecting the health and illness of populations) and add a master's degree student position and a three-year residency program in conservation medicine. By providing information to be shared with both public and professional members of the local, national, and international community, the zoo hopes to establish programs and initiatives to enhance conservation efforts and create a direct link to conservation programs in the field.

• The Beaver Area Memorial Library (Pennsylvania) used IMLS funds to subsidize the tuition cost of a student who will receive a master's in library science degree and work at the library.

Policy, Research, and Statistics

The 2003 reauthorization of the Museum and Library Services Act directed the Institute to conduct and publish analyses of the impact of museum and library services. IMLS responsibilities in this area were expanded with the passage of the FY 2008 Consolidated Appropriations Act.

In fiscal year 2008, the transfer of responsibility for national collection of data about public and state libraries from the National Center for Education Statistics to IMLS was completed. These data are essential to inform good management practices in libraries as well as to inform policy. The collection and use of these data is a core factor in the delivery of high-quality library services in the United States. The data provide ongoing basic information about libraries and library service. Over the years, these data have been collected consistently and with an astounding 100 percent rate of public and state library participation. IMLS is continuing this record of participation and striving to ensure that the data collected are accurate and delivered to the public as quickly as possible so that they can be of maximum use. We are also hopeful of having funds appropriated to begin ongoing national data collection about museums.

Also in FY 2008, the role of advising the President and Congress about libraries and information policy was transferred from the National Commission on Libraries and Information Science to IMLS. This responsibility fits well with the mission of the agency; the Institute has been a source of support for examination of library and information policy issues both nationally and internationally for more than 10 years. In the years to come, the Institute will continue to support research and convene experts to help inform public debate in a range of policy issues, such as the new role of libraries and museums in the Internet age, the ways that communications policy affects public access to information, and the role of libraries and museums in supporting learning throughout the lifetime.

National Medals for Museum and Library Service

All of the library and museum activities IMLS supports have the end user of those institutions in mind. All of the technology and education in the world means nothing unless it is put to use in the service of the communities museums and libraries serve. To emphasize this fundamental principle, the Institute established the National Medal for Museum and Library Service.

The National Medal honors outstanding institutions that make significant and exceptional contributions to their communities. Selected institutions demonstrate extraordinary and innovative approaches to public service, exceeding the expected levels of community outreach and core programs generally associated with its services.

Youth Initiative

The Institute's Engaging America's Youth initiative shines a spotlight on the role libraries and museums play in bringing about positive change in the lives of young people. The initiative included a study on youth programs in museums and libraries, the results of which showed that these institutions are unique in their ability to in-

fluence and educate youth. IMLS published a report on the study in December 2007. In May 2008 we published Nine to Nineteen: Youth in Museums and Libraries; A Practitioner's Guide, which features several examples of successful youth programming from around the country, as well as useful information for planning exemplary youth programs. I submit these two publications for the record.

21st Century Skills

IMLS is undertaking a landmark project to create tools that will enable museums and libraries to become effective 21st century institutions. This work will highlight the ways in which museums and libraries can use their resources to help communities develop the 21st century skills they need to succeed in the new global economy.

Conclusion

The Institute of Museum and Library Services is a small agency that makes a big difference. And that difference is felt in communities all over the United States. Museums and libraries are more than buildings with artwork or books or historic artifacts. They are integral parts of their communities and, as much or more than any other entity, they are crucial to the community's quality of life. It is my privilege, and that of everyone who works at IMLS, to help libraries and museums in essential work.

Thank you again for this opportunity. I look forward to answering any questions you might have.

Chairwoman MCCARTHY. Thank you very much.

I now would like to play a video on the conservation of the collectibles. [Video played.]

Excellent piece. And I think people don't realize how important it is to preserve that. I have to say, here in Congress, we have a tremendous amount of paperwork. And our House administration has really been pushing all of us, as members, to start collecting, filing, so when we leave—to give it to a library or give it to a university school so there could always be research on that. And many of us have started doing that.

Ms. LeBlanc?

STATEMENT OF SUZANNE LEBLANC, EXECUTIVE DIRECTOR, LONG ISLAND CHILDREN'S MUSEUM

Ms. LEBLANC. Good morning.

Chairwoman McCarthy, Ranking Member Platts, Congressman Davis and members of the Subcommittee on Healthy Families and Communities, I am pleased and honored to be here to offer testimony on the theme, "Examining the Role of Museums and Libraries in Strengthening Communities." I offer this testimony on behalf of the Long Island Children's Museum in Garden City, New York.

I have spent my entire career of 34 years working in children's museums and believe strongly in the potential of museums and libraries to anchor communities and to offer lively and engaging resources for lifelong learning.

Children's museums have a long history of providing resources for children and families in need. From the start, in 1899, when the Brooklyn Children's Museum opened its doors, children's museums saw themselves as filling a gap in the education of children and the support of families.

Anna Billings Gallup, one of the founders of the American Association of Museums, in 1906, and a curator-in-chief of the Brooklyn Children's Museum, wrote, "The Children's Museum idea is Brooklyn's gift to the world."

Following in these historical footsteps, the founders of the Long Island Children's Museum, from its very beginnings, had a keen sense of commitment to community, and an understanding of the important role the museum could play on Long Island.

In 2005, an opportunity presented itself for the museum to respond to the needs of the most vulnerable of families by entering into an innovative partnership with Nassau County's Department of Health and Human Services and Family Court.

The county opened a new Welcome Center less than a 10-minute walk from the museum that consolidated eight agencies under one roof. This initiative was christened, "No Wrong Door." No matter where a client would enter the human-services system, that person would now have access to any other needed service.

Shortly thereafter, I received a call from the head of the youth board. He wanted to tour the museum with a few of his colleagues. To my surprise, about 15 people arrived with him. They included the director of human services for the county, key Department of Social Services department heads, and a Family Court judge.

After this initial meeting, it became clear that several factors were converging that provided an opportunity for a sustained, invaluable partnership: The proximity of the museum and the Welcome Center, the mission and core values of the Children's Museum, the county's "No Wrong Door" initiative, and the passion and enthusiasm of county and museum staff.

It was clear that funding would be necessary for the museum to launch the staff-intensive initiative. I was familiar with the Institute of Museum and Library Services "Museums for America" program, as well as with the work of the Providence Children's Museum that brings court-separated families together in the museum.

The museum approached the county with the idea of developing a long-term partnership, submitted a proposal, and was awarded funding in September of 2007, for "Be Together, Learn Together." We determined early on that the development of the partnership itself would be of the utmost importance.

Project components and activities have taken shape as the project has proceeded, and include a redesign of the Welcome Center's supervised-visitation rooms—this is one of the more exciting things that is happening right at this moment—supervised visitations at the Children's Museum, weekly family activities at the Welcome Center, parent-and-family workshops, foster-care-awareness days at the museum, free museum passes for families and caseworkers, caseworker-appreciation nights at the museum, services to preventive providers, such as those serving teen parents, and collection days at the museum to support resource needs identified by the Welcome Center.

There are, of course, challenges in effectively implementing this collaboration. Caseworkers are dealing, on a daily basis, with children and families in great need and, often, in crisis. It takes enormous commitment on the part of these staff to put time and effort into implementing new procedures and programs in the face of their daily challenges. This was a really important thing that we realized.

For this reason, the development of the partnership was considered an integral part of the important work of "Be Together, Learn

Together." "Be Together, Learn Together," is neither the only, nor the first, major program initiative the museum has implemented to serve low-income or otherwise vulnerable children and families. I have discussed some of these other programs briefly in my written testimony. They, too, are part of the fabric and culture of the museum.

In closing, I would like to add a personal note and say that I remember the day when I first discovered libraries, realizing that I could read these books whether or not my family could afford to buy them. I also remember my first museum experience, as a teenager, visiting the Peabody Essex Museum in Salem, Massachusetts, with a friend.

I was hungry to learn about the world. And these institutions helped provide me with the resources that have guided me throughout my life.

Museums and libraries are important institutions that can have great impact on families and communities. IMLS plays a key role in enabling these institutions to pilot unique programs, to work together in museum-library partnerships, and to take leadership roles in strengthening their communities.

As a recipient of IMLS funds in Las Vegas, as well as now, in New York, I am familiar with, and deeply appreciate to impact of IMLS funding toward the creation of strong and vibrant community partnerships. Thank you.

[The statement of Ms. LeBlanc follows:]

Prepared Statement of Suzanne LeBlanc, Long Island Children's Museum

I am pleased and honored to offer this written testimony highlighting the role of museums in strengthening communities, on behalf of the Long Island Children's Museum in Garden City, New York.

As someone who has spent her full adult career working in children's museums in Boston, Brooklyn, Las Vegas and now Garden City on Long Island in New York, I have had the opportunity to witness firsthand, participate in, create and direct museum programs and major initiatives that have thoroughly inspired and engaged young people, supported family learning in important ways, and had a deep and lasting impact on families who began to view and use the museum as an important lifelong resource.

Children's museums have a long history of providing resources to children and families in need and of being trusted community institutions. To put our current discussion into context—December16, 1999 marked the 100th anniversary of the founding of the first children's museum in Brooklyn, New York. Anna Billings Gallup, one of the founders of the American Association of Museums in 1906 and a curator-in-chief of the Brooklyn Children's Museum said, in the Brooklyn Daily Eagle, "The Children's Museum idea is Brooklyn's gift to the world." In 1917, during World War I, the Children's Museum in Boston (the second oldest children's museum) briefly considered closing its doors because of the challenges of raising funds during wartime. But the museum's trustees "realized that * * * to close [the museum's] doors when thousands of children were looking to it for mental stimulus and satisfaction would be wrong." Shortly thereafter, during an extremely cold winter in 1918, Boston's schools were closed because of a shortage of coal. Many children had nowhere to go but the streets. The museum responded to this crisis by scheduling a series of daily lectures for young people. (See Appendix 1—"The Slender Golden Thread, 100 Years Strong.")

The Long Island Children's Museum (LICM), was conceived over dinner conversation among three couples in 1989 and first opened to the public in November of 1993 in 5,400 square feet of donated space in an office building that could only accommodate 98 people at one time and was intended to serve a demonstration site. Community response was immediate. LICM's first newsletter ran two headlines: "Museum Opens!" and "Board Begins Search for Larger Quarters." LICM is now housed in a 40,000 square foot former Navy airplane hangar on Nassau County land in Garden City. It has a $5 million annual budget, 100 employees and 65 volunteers. The Mu-

seum welcomes 265,000 visitors per year, including 40,000 schoolchildren. The founders of the Museum, from its inception, had a keen sense of commitment to community and an understanding of the important role the museum could play on Long Island. Robert Lemle, founding board member and current co-chair of the museum's board of trustees, said in a recent interview for the Oberlin Alumni Magazine, " This was a civic contribution that we could make: an institution that would be accessible to everyone and have an important impact on Long Island and our community." (See Appendix 2—"Child's Play.")

In late 2005 an opportunity presented itself for the Museum to respond in a significant and positive way to the needs of the most vulnerable of families by entering into an innovative partnership with Nassau County's Department of Health and Human Services (DHHS) and Family Court. In September 2005 Nassau County opened a new 219,000 square-foot Health and Human Services Welcoming Center across the road and less that a 10-minute walk from LICM. The new facility houses eight agencies under one roof—previously located in five different sites throughout the county. Receiving an average of 1,000 visitors each day, and some days as many as 2,000, the building is bright, positive and welcoming and includes a small staffed children's playroom and a library where books are given away. Most importantly, the new center provides "a single point of entry into the Health and Human Services system" for individuals and families in Nassau County. This initiative to consolidate the intake process, increase the efficient delivery of services and ensure an "outcome-driven approach to case management" was christened the No Wrong Door program. No matter where a client enters the human services system, that person will now have access to any other county or community service they need. (See Appendix 3—Nassau County Press Release.)

Shortly after this opening, Dr. Louise Skolnik, director of human services for Nassau County, key Department of Health and Human Services department heads and Family Court Judge Hope Zimmerman approached the Museum to meet and discuss ways to work together on behalf of families visiting the new Welcoming Center as well as those engaged with Child Protective Services, Preventative, Foster Care and Adoption Services and Family Court. After this initial meeting it became clear to museum and county staff that several factors were converging that provided an opportunity for a significant and sustained partnership between the county agencies and the Long Island Children's Museum. The proximity of the Museum and the new Welcoming Center, the mission and core values of the Children's Museum, the County's No Wrong Door initiative, and the passion and enthusiasm of DHHS, Family Court and Museum staff on behalf of families, formed a perfect situation for something groundbreaking to develop.

As a 501c3 not for profit agency, with 50% of its yearly budget raised from corporate, foundation and individual donations, it was necessary for the Museum to raise funds to launch this kind of staff intensive initiative and partner in such a significant way. The Museum's Executive Director, Suzanne LeBlanc, was familiar with the federal Institute of Museum and Library Services (IMLS) Museums for America program. She approached the county agencies with the idea of developing a long-term, sustained collaboration. The Children's Museum submitted an application for funding from IMLS in November 2006 and was awarded funding in September of 2007 for the program—Be Together, Learn Together. (See Appendix 4—LICM Community Access Fact Sheet—Be Together, Learn Together and Appendix 5—IMLS Grant Narrative.)

Several decisions and factors have contributed to the success to-date of this collaboration: an intensive pre-proposal planning process involving museum, social services and family court staff; the establishment of a joint planning committee (county agency and museum staff) that would meet monthly throughout the project, including the participation commitment of Dr. Louise Skolnik and Suzanne LeBlanc; the Children's Museum's hire of a full-time program manager, with substantial community programming experience, to coordinate all aspects of the project; an initial decision that this two-year project would be designed as a planning and prototyping phase, allowing program components to be adequately tested and evaluated, and the formation of a national advisory committee with local representation that would add expertise and national perspective to the project. The development of the collaboration itself is of paramount importance; allowing each partner to contribute talents and expertise that serve their shared audience.

The project components and activities have developed as the project has proceeded and include:

- a re-design of the Welcome Center's supervised visitation rooms by museum exhibit designers with input from caseworker focus groups and welcome center staff administrators, and utilizing prototyping of individual components with families before final design

• supervised visitations at the Children's Museum taking advantage of this positive, non-judgmental setting and fun learning environment
• weekly activities at the Welcome Center, taught by museum staff, for children and families waiting to be seen by Health and Human Services staff
• parent workshops focused on play, childhood development, and supporting pre- and early literacy skills
• Museum-led workshops for children and parents that incorporate activities that enable modeling of positive parent/child interaction skills
• awareness days at the Museum that increase public understanding of the urgent need for more foster care families
• free museum passes distributed at the Welcome Center to families, as well as to case workers
• caseworker appreciation nights at the Museum
• services to preventive providers such as to Long Beach Reach, which among other activities serves pregnant teens and teen parents
• collection days at the Museum for children's books, art and craft supplies, winter coats, back to school supplies and other drives to support resource needs that the Welcome Center identifies

I would like to discuss the re-design of the supervised visitation rooms in more depth as they are illustrative of the advantages of our unique collaboration. There are two rooms in the Welcome Center and while clean, they were small, with bare white walls and sofas that are difficult to clean, and that do little to encourage family interaction. The museum's director of exhibits, the Be Together, Learn Together program manager, and the administrator of the Welcome Center formed the nucleus of a project team to work on this environment. It was decided that before making significant changes it would be important to create a focus group to gather input from caseworkers who use the room for

supervised visitations. The buy-in of caseworkers and cleaning staff would be critical to the success of the room changes.

The Museum donated staff time and some funds for the changes and the Welcome Center accessed a small state grant to supplement the funds that would be needed. With feedback gathered, design drawings were created and prototyped components were developed to try-out with families and caseworkers in the supervised visitation rooms. A final design was approved at a meeting of the Joint Planning Committee, which included a new parent participant. Changes to one room are now being implemented; changes to the second room will follow after observation and feedback from families and caseworkers about the success of the changes to the first room. Training for caseworkers and cleaning staff will be conducted by the Museum. (See Appendix 6—Floor Plans and Rendering.)

Components of the new supervised visitation room include:
• a big, inviting, fanciful and colorful storytelling chair
• a collection of framed children's art on the walls with a mechanism for installing art done by children who use the room
• a large-size tic tac toe inset in the floor, with giant playing pieces
• a loveseat, kids round table with chairs, and the storytelling chair form the parent/child interaction zone
• Ceiling murals (4) that represent different kinds of skies—starry, cloudy, sunny and stormy with lightning
• A toy bench with a small number of developmentally appropriate toys in good shape
• An art supply cart
• A bookshelf filled with books to use with the storytelling chair
• A food prep counter
• A caseworker chair
• Rooms painted an inviting color
• New linoleum and rugs (with tic tac toe inset)
• Softer, colored lighting
• New furniture colorful, attractive, child-friendly and easy to clean

The redesign of the supervised visitation room is a wonderful example of a contribution that a museum, with exhibit designers on staff who are experienced in designing for children, can make to a social service agency. The redesigned room invites and welcomes families in, naturally encourages parent/child interaction, and communicates respect for the families who must visit with each other in this supervised setting.

There are of course challenges in effectively implementing this collaboration. In particular, caseworkers and administrators are dealing on a daily basis with children and families in great need and often in crisis. It takes enormous commitment on the part of these staff, to make time for meetings with the Museum and to put

time and effort into implementing new procedures and programs in the face of their daily challenges. It also takes a strong commitment, tempered with understanding and consistency, on the part of museum's staff to keep moving forward when things get preempted or delayed or move more slowly than desired. For this reason, the development of the partnership between the two institutions was considered an integral element of the important work of the Be Together, Learn Together program. (See Appendix 7, Letter of Support from Dr. Louise Skolnik)

The partners are currently in Year One of a two-year funded project and are committed to continuing to work together. Independent program evaluation, conducted by the Institute for Learning Innovation (see Appendix 8, Quick Response Memo, Year One Evaluation) was designed into the program to guide partners toward their goal of full program implementation and to ensure long-term program sustainability,

Be Together, Learn Together is neither the only nor the first major program initiative the Museum implemented to serve low income or otherwise vulnerable children and families. In 2002, with substantial corporate funding, Long Island Children's Museum initiated the KICKstart (Kids Ideas Create Knowledge) program, a multi-year initiative developed to deliver museum and outreach programming to all Head Start, second and third grade (and some fourth grade) students and their families in four of Long Island's most high-need school districts—Hempstead, Roosevelt, Central Islip and Wyandanch. This multi-year grant allowed the Museum to build trust in these communities with families, administrators and teachers and to offer consistent staffing, programming and services over several years. (See Appendix 9—Community Access Fact Sheet—KICKstart.) A program evaluation, looking at impact over time, was conducted this year by the Institute of Learning Innovation, who also conducted yearly evaluations of the last few years of the program. (See Appendix 10—KICKstart Critical Review Year 6 Evaluation.)

The Children's Museum has a multi-faceted early childhood program initiative that includes an exhibit for children from birth to five and their families, daily workshops for very young children and their families (Music and Movement, Story and Art, Creative Connections and Messy Afternoons). Parent workshops are offered on such topics as Parenting a Strong-Willed Child, and Living with Autism: A Team Approach. In addition, the Museum has begun offering a kindergarten readiness program for low-income families, which includes daily classes for children about to enter kindergarten and weekly classes for parents to prepare them for their role as their child's educational advocate.

The Children's Museum has a substantial Access program that subsidizes visits by individuals and community groups unable to afford the admission fee. Relationships have been developed with family shelters, boys and girls clubs, groups that serve children with autism and their families, groups that serve returning veterans and their families and others. This program also subsidizes outreach programs to schools, libraries and community groups in low-income areas. LICM offers museum family passes to all libraries for purchase that provide free admission for library patrons. The passes can be taken out just like books; they have been extremely effective in communities that serve middle and low-income families, sometimes with a waiting list months long.

The Long Island Children's Museum views itself as a community gathering place for important issues involving children and families to be discussed and presented. The Museum has a professional 150-seat theater offering an ideal location to host meetings, training seminars and other types of events. In the last few years, the Museum has hosted the launch of the Early Years Matter campaign, a two-day training for teachers and community workers on bullying, a Department of Health and Human Services county-wide meeting for all school district personnel to provide an update on Child Protective Services Laws and Protocol, the launch of the Long Island Index—an annual report on the state of the communities of Long Island, an annual expo featuring the programs and services of all Nassau County libraries, and recently, an Institute of Museum and Library Services meeting to outline grant opportunities for museums and libraries.

The title of this subcommittee session—"Examining the Role of Museums and Libraries in Strengthening Communities" is very relevant to the ways that museums are increasingly viewing themselves—as institutions with much to offer their respective communities in ways that serve the whole family, build partnerships, address community needs and serve as a vehicle for groups to come together and find common ground. Sally Osberg, previously the executive director of the Children's Museum of San Jose, noted "Children's museums speak to a deep desire to be anchored in a community and to see your children anchored in a community." (See Appendix 1.) Museums and libraries have been and continue to be important institutions that can have great impact on families and communities. The Institute of Mu-

seum and Library Services play a key role in enabling these institutions to pilot unique programs, to work together in museum/library partnerships and to take leadership roles in strengthening their communities. As a recipient of IMLS funds, both at the Long Island Children's Museum and at the Lied Discovery Children's Museum in Las Vegas, I am familiar with, and deeply appreciate the impact of IMLS funding toward the creation of strong and vibrant community partnerships.

LIST OF APPENDICES

Appendix 1. LeBlanc, Suzanne. "The Slender Golden Thread, 100 Years Strong." Museum News, Nov. /Dec. 1999, 49-55, 63.
Appendix 2. Waleson, Heidi. "Child's Play." Oberlin Alumni Magazine, Spring 2008, 18-21.
Appendix 3. "Suozzi Unveils "No Wrong Door" for Nassau County Residents"—Nassau County Press Release, November 29, 2004
Appendix 4. LICM Community Access Fact Sheet—Be Together, Learn Together
Appendix 5. LICM—2007 IMLS MFA—Grant Narrative
Appendix 6. Floor Plans and Rendering for proposed transformation of Nassau County Department of Health and Human Services' Supervised Visitation Rooms.
Appendix 7. Skolnik, DSW, Louise. Letter of support for Be Together, Learn Together 2007 IMLS MFA Grant Request.
Appendix 8. Institute for Learning Innovation—Quick Response Memo: Year One Evaluation
Appendix 9. LICM Community Access Fact Sheet—KICKStart
Appendix 10. Kessler, Cheryl and Storksdieck, Ph.D, Martin—KICKstart Critical Review Year 6 Evaluation. Institute for Learning Innovation, February 2008.

Chairwoman MCCARTHY. Thank you.
Ms. Zales?

STATEMENT OF MARY CLARE ZALES, DEPUTY SECRETARY OF EDUCATION, COMMONWEALTH LIBRARIES AND COMMISSIONER FOR LIBRARIES

Ms. ZALES. Good morning. Madam Chair McCarthy, Representative Platts and honored members of the committee, thank you for allowing me to testify today. I appreciate the opportunity to discuss the essential impact libraries have on America's 21st century communities.

I would like to focus on the innovative and creative ways libraries have reached far beyond their traditional role, to incorporate emerging technologies so they can better meet the changing needs of changing populations, and how, as a result, the library has a new and expanding role in the community.

Libraries are the information and cultural hub of the community. And all are welcome at the library, regardless of age, income, education, physical ability, or address. Libraries strive to serve their patrons throughout the lifecycle, from birth through end of life. And children have always been a priority for the libraries, and the work we do on their behalf will always be our most important work.

This committee, in particular, is aware of the emerging brain research which shows that pre-literacy experiences are irreplaceable in a child's brain development. Successful pre-literacy experiences influence academic success, which leads to career success, which, ultimately, impacts the health and vitality of our families, our communities and our nation. And libraries are uniquely positioned to help.

To help meet this need, and in so doing, they have an indelible impact on child development. In Pennsylvania, we incorporated

this research into our children's programs, "One Book Every Young Child" and "Family Place," where libraries bring together children and their parents with community resources and professionals in child development.

Pennsylvania also participates in the Summer Reading program, where over 280,000 children read through the summer and return to school ready to learn. This is more children than participate in Little League.

A recent Pew Foundation study on how Americans search for information showed people who used the Internet are more likely to use the library. This was true regardless of income.

This report is valuable because it refutes the lingering opinion that the Internet will replace the library. As public libraries provide many essential services to their communities, our school libraries have become sophisticated 21st century learning environments.

Across the United States, studies have documented that students score higher on standardized tests where there is a strong school library program. In Pennsylvania, middle schools with the highest state reading scores spend twice as much on their school libraries as the lowest-scoring schools.

States like Pennsylvania invest well in technology when they invest in programs that offer access statewide to vetted databases beyond what is available free on the Internet. And we share resources through shared online catalogs of schools, public and academic libraries. And to satisfy the public and the middle-of-the-night student, we offer around-the-clock virtual reference. For Pennsylvanians, and for a growing number of Americans, the library is never closed.

Services on behalf of libraries are more valuable and more heavily used during times of economic downturn. This is true whether it be personal or national. One Pennsylvanian noted, "The savings from borrowing one hardback book equals half a tank of gas."

And patrons are coming to the library for more that borrowing free books. They come for the computer, for Internet access, databases with job listings, training on resume development, techniques for interviewing and learning 21st century skills needed to find a new or a better job.

Recent statistics show nationwide libraries host 1.3 billion visits, and loan 2 billion items each year. This increase in activities equivalent is echoed in Pennsylvania—for, half the adult population, those over 18, physically visited their library last year.

Obviously, to meet the changing needs of our communities, libraries need adequate funding from all sources—local, state and federal. Allow me to state strongly: The innovation, the outreach, the spark of idea, the creative solutions that are responsible, in large measure, for the contribution by libraries to education and communities nationwide, would not have been possible without the Library Services and Technology Act.

In closing, I thank you for this opportunity. I report to you with confidence the funding invested in public libraries is a wise and fruitful investment, as all aspects of a community benefit. Libraries are continually advancing to meet the information, education and

enrichment needs of our nation. And as we can all testify, learning begins at the library. I thank you.

[The statement of Ms. Zales follows:]

Prepared Statement of Mary Clare Zales, Commissioner for Libraries, State of Pennsylvania

Chairwoman McCarthy and Ranking Member Platts, thank you for allowing me to testify today. I appreciate the opportunity to discuss how libraries are essential to America's 21st Century communities.

My name is Mary Clare Zales. I am the Commissioner for Libraries in Pennsylvania which is the position equivalent in other states to the state librarian.

I am also a member of the American Library Association, the oldest and largest library association in the world with 66,000 members who are primarily school, public, academic, and some special librarians, and also trustees, publishers and friends of libraries.

As Pennsylvania's state librarian, I am a member with my counterparts nationwide of the Chief Officers of State Library Agencies (COSLA). Its purpose is to identify and address issues of common concern and national interest; to further state library agency relationships with federal government and national organizations; and to initiate cooperative action for the improvement of library services to the people of the United States.

As Deputy Secretary for Libraries I lead the development of library services in Pennsylvania and oversee the State Library of Pennsylvania, one of four major research libraries of the state, that has recently completed a refocus of its mission placing an emphasis on its historic collections and becoming the destination library for Pennsylvania related materials and resources. Working most recently with various Commonwealth agencies and stakeholders, Pennsylvania completed the construction of a Rare Collections Library in preserving thousands of Commonwealth and national treasures. Among them is the 422-volume Assembly Collection purchased in 1745 by Ben Franklin and Franklin's 1754 Pennsylvania Gazette in which he describes his "Key & Kite Experiment."

I am here today representing the American Library Association, the Chief Officers of State Library Agencies, and most personally to represent library service in Pennsylvania.

I am proud of the role libraries play nationwide and of the role libraries play in improving and enriching the lives of Pennsylvanians. Pennsylvania has 458 public library systems with 635 library locations and 35 bookmobiles to serve our twelve million residents. There is a state-funded library meeting state standards in every one of our 67 counties with 97% of our population eligible for a library card without charge. Pennsylvania represents 4% of the country's population, and we have 5% of the nation's public libraries. As it is true nationwide it is true in Pennsylvania, there are more public libraries than McDonalds!

With this testimony, I would like to focus on how libraries are reaching new populations in new ways; and how their presence in the community is growing. First, I would like to say the time honored and traditional role of the library is intact. We remain a resource and repository of the printed word. I believe reading and lending books will continue to be the fundamental role of libraries. That said, let us open the door of today's library and see the many ways they serve our communities.

Every day across the country knowledgeable librarians provide culturally diverse communities with a broad range of services for people of all ages and backgrounds. In Pennsylvania, anyone can come into a state-aided library and access the materials before them. This is true regardless of income, education, physical ability or address. Actually, even if you don't have an address, you are welcomed. And you are welcomed to remain anonymous. We only ask that you apply for a library card if you choose to borrow from the library or participate in programs.

Libraries in Pennsylvania, like libraries nationwide exist to serve. This means at the core, the mission of every library regardless of type or location is the same: to meet the information, education and enrichment needs of those they serve. And libraries serve the full community throughout the life cycle * * * from birth through the end of life.

Services to Children

Libraries are often the first opportunity a child has to interact with books. Libraries across the country are providing important early literacy services for young children as well as a wide assortment of books, music, audiobooks, DVDs, computer pro-

grams, and so much more that can be used in the library or at home. Story times are popular as they offer preschoolers an engaging experience with books.

In Pennsylvania, we have a strong focus on infants, toddlers and children. I suspect this committee in particular is aware of the emerging brain research which demonstrates that pre-literacy experiences are irreplaceable in a child's brain development and influences academic success. The absence of pre-literacy experiences has an impact on career success and ultimately impacts the health and vitality of our families, communities and our nation

The library community of Pennsylvania recognized the need to incorporate these findings in our programming. As a result, we initiated the One Book, Every Young Child program using the one-book-one-community model. Every April we select a pre-literacy book that will be read to young children across the Commonwealth. The program prompts child care centers, pre-schools and libraries to plan events and activities related to the theme of the selected book which will engage children, parents and caregivers in early reading practices.

This year's title was read to 21,000 children in home-based child care and class-based early care and education programs in addition to being read in virtually all our public libraries. All 67 counties participated in One Book Every Young Child events and over 90,000 copies of the book were distributed through libraries and their community partners. In all, approximately 560,000 preschool children were reached this year by the program. We are working with pediatricians and health care clinics to put a copy of the One Book title in waiting rooms across the state. I am proud to report our One Book Every Young Child program won the 2007 John Cotton Dana award, one of the most prestigious awards bestowed by the American Library Association. Since 2004, we have sponsored an Early Learning Forum and Best Practices Awards program each year. Identifying best practices and providing evidence of the importance of early literacy has elevated children's programming statewide. Over 30 years of research confirms the foundational importance of early education and care for children's school and life success.

If we expect our students to achieve high levels, we must start them off early and start them off right. Early education and care provide a critical focus for our efforts. Strong libraries play a vital role in this early learning for tens of thousands of Pennsylvania families.

Pennsylvania is proud to participate in the national Family Place Program that builds on the role of the library as the core of the community. Family Place Libraries reserve physical space in the library to conduct programs for young children and their parents, bringing them together with community resources and professionals in child development. In Doylestown, Pennsylvania, a parent attending Family Place Programs at the Bucks County Free Library commented that "I thought that the library just had to do with reading and books. This was a different opportunity for using toys, play and social interaction. The library has a bigger role. You went beyond what I expected."

The Yeadon Public Library in Delaware County reported that during a Family Place workshop a mother expressed strong concern about her son who was diagnosed with autism. The library connected the parent with child development specialists and the next week her son was receiving assistance. Pennsylvania leads the nation in the number of Family Place Libraries.

A perennially popular children's program is the Summer Reading program which is now more than one hundred years old. It is also the very first program public libraries offered and it began in Pittsburgh, Pennsylvania. This summer in Pennsylvania, more than 280,000 children of all ages joined with children nationwide and in American military bases to read under a common theme.

The work on behalf of our children is the most important work we do. This emphasis in Pennsylvania is reflected in the Sullivan Award for Public Library Administrators Supporting Services to Children having been awarded in 2006 to Janice Trapp, Director of the Lycoming County Library System in Williamsport, PA. An example of one program at her library is "Celebrating the Birth of Each Child." When each of the 1,500 or so babies born each year in Lycoming County leaves the hospital, mom takes home a tiny backpack, courtesy of a community-funded program of the library. Inside is information about library programs, a book, a stuffed animal—and a Baby Library Card.

Services to Seniors and Special Populations

Older adults enjoy the many services and resources of the public library. From book clubs to health seminars to travel and medical resources, older Pennsylvanians like older adults nationwide feel right at home in their public library. For example, the Adams County Library System is one of many libraries that partner with American Assoication of Retired People (AARP) to offer seniors tax services to more than

500 seniors. In Cumberland County the library system and Hospice of Central Pennsylvania developed a partnership to provide homebound service to hospice clients and their families.

Libraries also provide important community services and programs for non-English speakers. Nationwide 78% of libraries reported Spanish as the main non-English language used in the library. Libraries work with the Spanish-speaking community by offering specially developed story times and Spanish and bilingual library materials.

Public libraries partner with the National Library Services for the Blind and Physically Handicapped in the Library of Congress to serve those who cannot use a traditional book due to visual or physical handicaps. This program opens up the world of books to Americans with disabilities that would otherwise make it impossible for them to read. Though traditionally viewed as a service to the aging community, in Pennsylvania alone there are 261,000 children between the ages of three and eighteen, many of whom would not be able to succeed in school without recorded materials.

The two Regional Libraries for the Blind and Physically Handicapped in Pennsylvania located in Philadelphia and Pittsburgh lend two million recorded, Braille and large print books and magazines each year. The Libraries for the Blind and Physically Handicapped reach out to those in short term and long term need with the most recent outreach being to returning soldiers

Currently the National Library Service for the Blind and Physically Handicapped is undertaking a transition from a cassette based format to a new digital format that will be much easier to use and offer a downloadable option.

Helen Jane Kane of Butler County in Pennsylvania captured the intrinsic value of this service when she said: "The books have really helped me keep a more positive mental attitude and added another dimension to my life." Grace Bussler, also from Butler County, added "These books have been a godsend to not just me but my family also, because if I'm happy and satisfied, so are they."

Libraries and Technology

While computer use has increased substantially in the United States, many American households still do not have home computers or home Internet access. Libraries are working to close this "digital divide" in many of our nation's distressed communities by providing no-fee, public access to computers and the Internet. Nationwide 73% of all libraries report they are the only provider of free Internet access in their communities. In rural areas, the role of the library is even more critical as 83% of libraries are the only free Internet provider.

The report "Libraries Connect Communities: Public Library Funding & Technology Access Study 2007-2008" was released last week. This report assesses public access to computers, the Internet and Internet-related services in public libraries of the United States, and the impact of library funding changes on connectivity, technology deployment and sustainability. Chairwoman McCarthy, I request the executive summary of the report be submitted into the record as Appendix A of this testimony.

The report found that America's 16,543 public library buildings are leveraging technology to help students of all ages succeed in school and support lifelong learning. More than 83% of libraries now offer online homework resources, including live tutors and collections of reliable Web sources—an increase of 15% in one year. Libraries also reported significant increases in the number of audiobooks and podcasts (33% increase) videos (32% increase), e-books (13.5% increase) and digitized special collections (13% increase). As Americans are changing the ways they meet their educational, entrepreneurial and entertainment needs, libraries are changing with them and making access more convenient in person and with expanding services online.

As stated in the report, a student in Kentucky without a computer or Internet at home used her public library and the free online tutoring program every week of her last two years of high school to assist with AP level courses in algebra and physics. Heather told library staff her grades went up and her stress levels went down because of the library services and resource. Heather is now in college and has plans for medical school.

A Pew Foundation study on how Americans search for information was released in December.[1] The study showed people who used the Internet were more likely to

[1] Leigh Estabrook, Evans Witt, and Lee Rainee, "Information Searches That Solve Problems: How people use the Internet, libraries, and government agencies when they need help," (Pew Internet and American Life Project, December 30, 2007). Available on the Internet at *http://www.pewinternet.org/PPF/r/231/report—display.asp.*

use the library than people who do not use the Internet. This was true regardless of income.

This refutes the supposition by some that the Internet will render libraries obsolete. This study also revealed significant new information on who is using our libraries. Traditionally, the profile of the library user was a middle-aged female. This study shows a dramatic shift in that profile to young people ages 18 to 30. This shift indicates two current realities about our libraries 1) libraries are successful in offering technology that attracts younger users and 2) it charges libraries with keeping pace with emerging technologies to continue to support the information needs of young adults as they grow into adulthood.

Libraries use technology to link communities around the country and provide users access to information through state, regional, national and international networks. Many states offer a statewide network to provide enriched content databases and to open access to resources statewide. Pennsylvania offers three major programs that support the use of emerging technology and open access to on-line, vetted databases.

The Pennsylvania On-line World of Electronic Resources—POWER Library—allows access to authoritative resources for children, students and adults through their school or public library or remotely through the public library website. The POWER Library extends access to journals, e-books, dictionaries, encyclopedias, the AP photo archive and much, much more. Last year over 35 million articles and items were examined, which is a 71% increase in usage over the past three years.

Pennsylvania also offers a statewide electronic library catalog called the Access Pennsylvania Database. This on-line catalog shows the holdings of more than 3,000 school, public, academic and special libraries throughout Pennsylvania. The database has more than 67 million holdings and 15 million unique titles.

Virtual reference service is a relatively recent addition to Pennsylvania's on-line services. The Ask Here PA program was launched in September 2006 as a virtual reference service available to all residents twenty-four hours a day, seven days a week. There is a second tier to the Ask Here PA program for college level and more in-depth questions. To date, over 42,000 live chat questions were asked. If this level of activity continues through December 2008, as it is expected to, Ask Here PA will be the most active virtual reference service in the nation. Greater than 50% of the activity is from Pennsylvania's students.

Through these programs in particular, Pennsylvania's libraries, like a growing number of libraries nationwide, are now serving our communities 24-7—The library never closes!

Libraries and Economic Development

Libraries play a valued role in the business community. In a growing number of communities, libraries are opening business branches offering specialized collections, providing business-specific training in discerning credible research, studies, even grant opportunities as well as assisting with business development initiatives.

For many small businesses, the library is the source for research and a specially trained and experienced staff they could not otherwise afford. Greg Skoog credits the Hickory Public Library in North Carolina for getting his transport company started. He used books from the library on writing a business plan and cash flow analysis; he used the Internet for research and wrote his business plan. Mr. Skoog said that basically, the library was his office for three weeks. He now employs 135 people.

Libraries in Tough Economic Times

The public library plays an even more important role as Americans are facing tough economic times. Library usage is up ten percent from the last economic downturn in 2001. Debbie Long of West Goshen in Chester County, Pennsylvania noted the price of borrowing one hardback book from the library saves her enough to fill her gas tank halfway. So this year, she is frequenting the West Chester Public Library instead of the bookstore. "Between the price of gas and that little extra money that we've lost, I'm not buying books and music like I used to." She is driving to her nearby library and using its free services. "I love it," she says.

Patrons are visiting their library for more than the borrow of free books. Libraries offer databases with job listings, training on resume development, techniques for interviewing and 21st century skills needed to get that new job. The Washoe County Library System's Community Resource Center in Nevada helped Stephanie D'Arcy, who hadn't had full-time employment for several months; successfully get a job with the local parks and recreation department. "I needed guidance," D'Arcy said. "The library staff offered me encouragement and assistance filling out the application, in-

cluding pointing out the transferable skills I could list, plus some tips for interviewing. If it were not for the library's help, I wouldn't be where I am today."

That library attendance has increased is not a surprise. Studies from generation to generation have shown that in times of economic downturn, libraries become busier.

Looking at Pennsylvania for example, the number of items lent continues to increase. Since 2000 there has been a 24% increase in the lending of library materials in Pennsylvania from 54 million to 67 million books and other items. Unfortunately, this increased use comes at the very time communities are least able to support their libraries. Many states across the country will be struggling to meet their maintenance of effort requirements to maintain eligibility to receive LSTA funds.

Increasing Use

In states across the nation and in counties across Pennsylvania, the role of the library has emerged as both a destination for resources and a place to engage with the community.

In Pennsylvania, libraries are becoming better and better at identifying and meeting the changing needs of their communities, and are becoming the information and social center of that community. This role is a natural fit for libraries as they open access, expand services, offer targeted programs and invest in technology that is valued by the community—from the youngest to the oldest. The effort shows as more people are visiting and using libraries than ever before. Nationwide, recent statistics show libraries host more than 1.3 billion visits and circulate more than 2 billion items in each year.

Attendance figures continue to go up in Pennsylvania as well. Last year there were 45 million visits to libraries, including 3.5 million people attending library programs. We are also pleased to note that last year in Pennsylvania half the population aged 18 and over physically visited a library. This does not include those who used the library remotely only.

Libraries Contribute to the Economic Community

An investment in libraries is an investment in the community. In Pennsylvania a study conducted by the University of North Carolina at Chapel Hill recently showed that for every dollar invested in the public library, the community receives a return on investment of $5.50. Studies in other states across the country have shown similar results.

Not only is there an economic return on investment to citizens and organization users, the surrounding communities receive an economic return in ripple effects from salaries and wages paid to staff, library purchases made, and a halo effect from spending in the nearby community by visitors during their trips to the public libraries.

The Significance of LSTA Funds

In addition to state and local funding, libraries would not be able to have the enormous social impact on their communities without the Library Service and Technology Act (LSTA). LSTA is the only federal program exclusively for libraries, and it is administered by the Institute of Museum and Library Services (IMLS).

LSTA expands services for learning and access to information resources in all types of libraries for people of all ages. Pennsylvania, for example, uses LSTA funds to support their summer reading program in which more that 280,000 children and teens participated—the largest number to date. More Pennsylvania students participated in the summer reading program than played Little League!

Other significant uses of LSTA funds in Pennsylvania include grants to libraries to develop innovative services including state of the art electronic networks, training programs for school, academic and public librarians and for library trustees. A School Librarian Toolkit was developed to alignthe school library resources and services with Pennsylvania's academic standards. LSTA also made possible the POWER Library online databases, the One Book Every One Child program, and collection development grants for public and school libraries.

The Contribution of our School Libraries to Student Achievement

At the same time public libraries provide many essential services to their communities, school libraries have become the cornerstone of the school. School libraries are no longer just for books. Instead, they have become sophisticated 21st century learning environments offering a full range of print and electronic resources that provide equal learning opportunities to all students, regardless of the socio-economic or education levels of the community.

Across the United States, numerous studies have shown that students in schools with strong school libraries learn more, get better grades, and score higher on

standardized tests than their peers in schools without libraries. A recent study showed that Pennsylvania middle schools with the best PSSA reading scores spend twice as much on their school libraries as the lowest scoring schools.

The skills needed to function successfully in a 21st Century global workforce have gone beyond reading. Business leaders are concerned that too many workers are entering the workforce without information literacy skills—those skills needed to find, retrieve, analyze and use information. These are the skills that equip workers with the ability to think critically and work proficiently. Who better to teach information literacy than librarians, the information experts?

Some of the major skills that school library media specialists teach are the techniques and methods for locating and answering curriculum needs through critical thinking. Using the library's many and varied resources, school librarians also teach students how to work collaboratively, which, combined with the information literacy skills, is ideal for ensuring college readiness and success in the workforce.

In Closing

Thank you again for this opportunity to share with you the traditional and emerging roles of our libraries and their dedication in meeting the needs of our communities nationwide. I report to you with confidence, the funding invested in public libraries is a wise and fruitful investment as all aspects of the community benefit. Libraries support the development and care of young children and families, support formal education and strengthen local economies. Libraries add richness and quality to the life of adults and seniors and special populations. There is so much more libraries do for our communities that cannot be quantified in data or studies. Libraries satisfy the curiosities of the lifelong learner throughout life—and as we can all testify, learning begins at the library.

An investment in libraries is an investment in communities.

Chairwoman MCCARTHY. Thank you very much.

Ms. Nunez?

STATEMENT OF ANNA NUNEZ, ARIZONA HEALTH SCIENCE LIBRARY LIBRARIAN, UNIVERSITY OF ARIZONA

Ms. NUNEZ. Good morning, Chairwoman McCarthy, and members of the Healthy Families and Communities——

Chairwoman MCCARTHY. Is your mic on?

Ms. NUNEZ. Thank you, Chairwoman McCarthy, and members of the Healthy Families and Communities Subcommittee. I am honored to be here this morning on behalf of Dr. Jana Bradley, Director of SIRLS, the School of Information Resources and Library Science, at the University of Arizona, in Tucson.

I am a medical librarian at AHSL, the Arizona Health Sciences Library. I am a graduate of K.R., the Knowledge River program, at the School of Information Resources and Library Science. This program is IMLS-funded, designed to recruit Hispanics and Native Americans to the field of librarianship.

Over the past 2 years, I have served as co-advisor to the SIRLS Wellness Education program, known as "WE Search," an initiative funded by the Laura Bush 21st Century Librarian Program. I have personally experienced the benefits of this federally funded initiative.

I was accepted into the SIRLS Masters of Library Science Degree Program as part of the first cohort. As a student, I served former Knowledge River Director Patricia Tarin, as a graduate research assistant and program manager. We developed a strategy for recruitment and retention.

Shortly after graduating, I was employed at the Arizona Health Sciences Library. The course of study provided by the K.R. program focuses on training Hispanic and Native American students to

enter the profession of librarianship, and, in doing so, to improve information access and services to these communities from a culturally and linguistically appropriate perspective.

My own path led to a newly created position at the Arizona Health Sciences Library, as the Arizona Hispanic Center of Excellence services librarian. As the first HCOE librarian, I serve the university's College of Medicine in its goal to recruit and retain Hispanic medical students and faculty, to provide research support to faculty, and to provide support for researchers and research conducted on and in the Hispanic community.

My work included creating a Web site of Hispanic health resources, to increase the library's collection of culturally and linguistically appropriate materials, and to expand the library's outreach services to community and health-care organizations that serve the Hispanic population in Arizona and along the U.S.-Mexico border.

In all of my work at the Arizona Health Sciences Library, I have remained committed and involved in Knowledge River. The Laura Bush 21st Century Librarian Grant has supported the WE Search program, a component of the Knowledge River program.

During their summer recess, both Knowledge River students and high-school students from Sunnyside High School, our WE Search partner, participate in a weeklong institute. They learn to use information technology and tools, and developed information-seeking skills to serve as peer-health-information advisors.

They provided classroom presentations and community presentations, and health-information resources targeting health issues of concern for the community. The teams worked with their Knowledge River mentees to develop information resources, making them available to high-school teachers, and having them at health fairs and community events.

The WE Search blog truly chronicles some of the successes of the program. To quote, "WE Search taught me that the library is not just a place for reading, but is also a place that offers fun activities for all ages, and is well equipped with good resources. WE Search has also prepared me for college."

Another student states, "After WE Search is over, I plan on continuing on helping students, as well as my community, by informing them about how useful the library is, and also about how useful many Web sites can be, such as MedLinePlus and KidsHealth."

I, personally, have seen a transformation in the students. They have become confident public speakers and well informed health-information purveyors. A former WE Search teen is now employed as a page at the neighborhood public library. During WE Search, several students had expressed an interest in pursuing a health career—of course, one of which is a medical librarian.

Since this grant was awarded, over 50, if not more, Hispanic and Native American librarians have joined the library workforce. We are in a variety of library-information environments, and are serving these two cultural communities bilingually and biculturally.

As a Knowledge River graduate and a WE Search advisor, I truly believe these programs have contributed to the diversity of libraries, has increased the access to information for these two cultural communities, and has laid the foundation for a model for other in-

stitutions to adopt or to adapt, for successful connection to their community.

I am extremely grateful for this opportunity to share with you the contributions of our programs, and I would be happy to answer any questions you may have. Thank you.

[The statement of Ms. Nunez follows:]

Prepared Statement of Anna Nunez, Arizona Health Science Library Librarian, University of Arizona

Thank you, Chairman George Miller and members of the Committee, for the invitation to be a witness at the Subcommittee on Healthy Families and Communities of the Committee on Education and Labor of the U.S. House of Representatives, hearing on "Examining the Role of Museums and Libraries in Strengthening Communities."

I am honored to contribute to your examination of the roles that libraries play in strengthening communities, and in particular, on the contribution of the program at the School of Information Resources and Library Science, funded by the Laura Bush 21st Century Librarian Program and titled "Knowledge River. This program recruits Native American and Latino students in a program leading to a master's degree in library and information science and includes community outreach to teens to address health concerns in Tucson.

Background

Libraries and librarians have changed greatly in the last several decades. They now see their role as connecting individuals and communities with information, both print and electronic, to improve and enhance their lives. Public libraries see themselves as service agencies, often working with other service agencies to use information as part of a unified strategy to address community problems. Public libraries also work with health agencies and with health libraries, as a distribution and outreach point for consumer health information. And, increasingly, public libraries have after school programs, providing a safe place for children and teens to gather, have fun, and learn. Libraries in high schools, community colleges and universities see their role as information coaches, providing students, often first generation college students, with help to find and use information.

Additionally, as our society has become increasingly digital, libraries are a public resource for providing computers to those who don't have other access to them. Access to computers alone is not enough. Librarians also provide instruction in how to use computers to find accurate and trustworthy information. In the information world of the Internet, with its chaotic mix of fact, advertising, and misdirection, learning to find and identify trustworthy information is probably one of the new literacies Americans need to improve their lives.

Education to be a professional librarian requires a master's degree. Any subject studied at the undergraduate level can be the foundation for graduate work in library and information science. Schools that grant a master's degree in library and information science are accredited by the American Library Association (ALA). The grant that is the subject of this testimony, the Knowledge River grant, was given to the School of Information Resources and Library Science, at the University of Arizona, as part of its ALA accredited master's program

Knowledge River

The Knowledge River (KR) grant, awarded by the Institute of Museum and Library Studies in 2005 to the School of Information Resources and Library Science (SIRLS), had as its overarching goal to ensure that the work of librarians, described above, extends into Hispanic and Native American communities, historically communities that have not had access to library and information services, and also communities where information is vital to improving and enhancing their lives.

KR employed two strategies to achieve this goal:

- Recruiting and educating Hispanic and Native American graduate students to be librarians, including coursework that focuses on library and information issues and services from Hispanic and Native perspectives.
- Providing opportunities for KR students to participate in outreach and workforce development by mentoring high school students in health information-seeking skills and showing them firsthand the power of information to change lives. In addition, the mentor/mentee relationship provides role models for Hispanic and Native American teens and makes them aware of the routes through college and graduate

school available to be health care professionals or library and information professionals.

Each of these strategies will be described briefly.

1. Recruiting and educating Hispanic and Native American graduate students to be librarians, including coursework that focuses on library and information issues and services from Hispanic and Native perspectives.

During the period of this grant, 52 Knowledge River scholars were recruited, 19 Native Americans and 33 Hispanic/Latinos. The grant exceeded its projected outcome by four students. Thirty students have already graduated, and when the remaining students graduate, we will have met our target goal of graduating 45 Hispanic and Native American librarians. These librarians are well trained in the fundamentals of Library and Information Science, in library and information services from Hispanic and Native American perspectives and in the use of information technology to find and use information.

The importance of adding nearly 50 Hispanic and Native American librarians during this grant to the workforce of trained professional librarians cannot be underestimated as an essential part of providing library and information services to these cultural communities. Only 2% of librarians are Hispanic and less that 1% are Native American, according to a recent study by the American Library Association based on the 2000 census. Increasing the number of these librarians is vital, because "institutions must have the face of the communities they serve," according to Patricia Tarin, who helped start the program and was its director from 2001 to 2007. Again from Patricia Tarin: "For many people who don't have access to books and technology, libraries can be the gateway for information, knowledge and empowerment. But many won't use a library if there's nobody there who shares their culture or speaks their language." (Appendix 4: Tucson Citizen, January 4, 2007).

And a 2006 study conducted by researchers at the School of Information Resources and Library Science demonstrates that having Hispanic and Native American librarians in libraries DOES increase services to these communities. Although the data indicate that information services to Latino and Native American cultural communities among institutions employing Knowledge River graduates remains problematic, fully 80% of the respondents indicated that they personally provide information services to these cultural groups, and more than half report that they or their institutions are offering new services to these communities since beginning their employment. (Appendix 1: Fulton, Tarin, Bradley, 2006).

2. Providing opportunities for KR students to participate in outreach and workforce development by mentoring high school students in health information-seeking skills and showing them firsthand the power of information to change lives.

The WE Search (Wellness Education) program is one of the highlights of the Knowledge River program. I strongly suggest that you glance through Appendix 3, which is the summary of the program in the KR students' own voices. This is authentic testimony to the truly amazing accomplishments of both the KR graduates and the WE Search high school students in the six-month program.

I also suggest that you visit the website created by the KR graduate students and the WE Search high school students, showing graphically who they are, what they did, and an annotated list of trustworthy health information resources they discovered. The url is *http://wesearch07.googlepages.com/*. Another way to experience the authentic voices of both the KR graduate students and their high school mentees is to visit the blog they created as the course progressed. *http://wesearch.wordpress.com/*

Highlights of the program are described below:

- The WE Search program is a partnership of the Knowledge River program and Sunnyside High School, a high school of predominantly Latino and Native American students. The KR graduate students served as mentors to the high school students.
- The KR graduate students prepared for their role by taking two graduate courses during the summer, one on health disparities and cultural competencies, and another on health information resources.
- The KR graduate students and their high school mentees participated in a week-long summer institute, filled with bonding activities, fun and games, and also serious learning. The high school students learned presentation skills and other information technology skills, while the KR graduate students were instructed in teaching skills.
- During the fall semester, the KR mentors and mentees met in small groups once a day. The KR graduate students themselves met and planned the curriculum and the teaching modules so that all the high school students received the same material.

Topics and activities were:

• Health disparities and valid resources documenting these (Center for Disease Control, U. S. Census Bureau, etc)
• Learning about free, authoritative resources addressing health disparities (Medline Plus from the National Library of Medicine, etc)
• Creating information pamphlets for their peers and giving presentations to classes
• Taking information to the community through outreach events, such as
- Junior Scientists Kids Day at the University of Arizona
- Tucson Hopefest
- Academic Night at Sunnyside High School
• Creating a permanent web resource documenting what they had done
• The KR graduate students took their high school mentees on a field trip to a predominately Latino neighborhood library that had an after school program for children and teens. The high school students got right into the spirit, playing games and Dance Revolution with the kids. This gave them a firsthand view of the role many libraries are playing in their communities by providing safe places for children and teens to congregate and constructive games and activities for them, often when there are no other such services in the community.
• Outcomes: All the high school students reported that they had a new understanding of the importance of health information and the roles librarians could play. Several indicated interest in health careers or careers as librarians or information professionals. All the KR graduate students can serve as consumer health information resources, no matter what type of library they choose.

We at SIRLS and Knowledge River are very proud of our Knowledge River graduates and all they have accomplished, and will accomplish, and it is our pleasure to share these accomplishments with you.

APPENDICES:

1. Knowledge River: Community Impact and Service to Latino and Native American Cultural Groups. This is a study of the impact of KR graduates on their workplaces and communities after graduation.
2. WE Search Final Report. This is a report written by the Knowledge River graduate students, summarizing what they and their mentees did, and their evaluation of the success of the program.
3. Turning the Page. This is an article that appeared in the student newspaper, the Arizona Wildcat, in 2007 about the Knowledge River program
4. UA Pushes for More Minority Librarians. This is an article that appeared in the Tucson Citizen, a local Tucson newspaper, about the Knowledge River Program

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Chairwoman McCARTHY. Thank you for your testimony.

Dr. Jolly?

STATEMENT OF ERIC JOLLY, PRESIDENT, SCIENCE MUSEUM OF MINNESOTA

Mr. JOLLY. Madam Chairwoman, Mr. Davis, distinguished members, counsel, and guests, thank you for allowing me to be here today to talk about what I believe is one of the most essential parts of serving our community, helping us advance all forms of literacy. And for the Science Museum of Minnesota, that literacy includes science, technology, engineering, and math. And when I speak of science, I refer to all of these literacies as essential literacies.

We believe these literacies are essential on many dimensions, too; chief among them, these literacies are essential for civic engagement. At a time when our nation is confronting issues about E-85 ethanol, about the use of genetically modified organisms, nanotechnology, stem-cell research, vaccination challenges in our schools, having a citizenry that is informed on issues of science literacy is essential.

It is also essential not simply for civic participation, but for economic participation. We are looking at—three out of five jobs in the future economy that will pay more than minimum wage are going

to require more than a passing knowledge of the STEM disciplines. Yet, this essential literacy is neither equitably nor broadly distributed.

It is a shame that when surveyed by the National Science Foundation, fewer that 48 percent of Americans could identify accurately that it takes the earth 1 year to revolve around the sun. These are our voters. We owe them better than that.

Civic participation, economic participation, needs to be broadly disseminated, and it needs to be equitably disseminated. We see an equity challenge in the achievement gap between minority and non-minority students in math and science scores, between rich and poor. But we also see an aspiration gap, with fewer women entering engineering today than any time in the last decade.

The role of museums has never been more relevant to the future of this country's well-being. And the opportunities that they have to enforce change is dramatic. Consider this: School day is 6 hours, school year 180 days; less than half a year, less than a quarter of day. Add in some absenteeism, and by the time a child graduates from high school, they will have spent a remarkable 9 percent of their life in school.

Schools do a remarkable job with 9 percent of a child's life. They spend more than a third sleeping. Roughly 3 percent eating, occasionally bathing and other life skills, leaving more than 42 percent of their life un-programmed, with an opportunity for museums and libraries to reach into their homes through their community and through their experience, to inspire them.

We could do many things. When researching what it takes to help students achieve in the stem disciplines, it was very clear—research funded by the G.E. Foundation that there are at least three essential elements that must appear at some level in every child's life. There must be engagement. They must have the spark, the curiosity, the interests to pursue these disciplines.

But if they are engaged but we haven't given them the capacity, if we haven't given them the knowledge and skills to advance to more rigorous disciplinary content, they can't go on.

If you fail algebra I, you are not going to pass A.P. Calculus. We need to get kids excited and engaged. We need to give them the capacity, and we need to point the way for continuity, so that they have taken the programs necessary to advance to the next level.

We need children on track for the mathematics of their future, not the mathematics of our past. And we need to, at the level of each child, partner with institutions that can, like a science museum, spark that engagement and curiosity; that can, like a library, assure a level of capacity; that can, like any other community center, provide continuity.

We need to do this in many ways. We need to do this out of our building, as well as in our building. At the Science Museum of Minnesota, we placed learning centers in low-income-housing community centers, so that preschool children can come in and just play with science and the ideas of science; their own laboratories, their own places to learn.

We involve parents in giving them hopes and dreams for their children's future. We work with over 100 United Way agencies and allow them to deliver tickets to the Science Museum—low-income

memberships—so that everyone who walks through the door with a ticket to our museum, whether they get it through an agency that served them, or through our box office, walks in with the same ticket and the same credibility.

We want to serve our people by being in their community.

In summary, we know that we have a tremendous opportunity to advance what I believe is the most liberating force in human development, education; whether it happens formally or informally, in the 9 percent or the 42 percent. And we can advance that when we start attending to who informs our work and diversify who gets to set our agenda and tell us what is needed next—who forms our work; who actually constructs the product that we bring into our communities, and we start measuring who benefits from the work.

We will close the achievement gap. We will close the aspiration gap. And we will do it because we are a trusted member of a community, and we have the passion to serve. Thank you.

[The statement of Mr. Jolly follows:]

Prepared Statement of Dr. Eric J. Jolly, President, Science Museum of Minnesota

Chairwoman McCarthy, Ranking Member Platts, and members of the subcommittee, thank you for inviting me here today. My name is Eric Jolly, and I am the president of the Science Museum of Minnesota. I'm grateful for the opportunity to discuss the role that museums and libraries can play in strengthening our communities. At the Science Museum of Minnesota, we reach well over a million people each year through visits, training, classes and outreach, but we strive to always increase the quantity and quality of our relationships. Our challenge and opportunity is to use our deep capacity, even more fully, in response to the nation's quiet crisis in science and math education: We continue to believe deeply that science is an essential literacy for civic and economic participation.

Science and technology based industries represent the fastest growing segment of our economy and the highest paid jobs in our future. In the next decade, three out of five leading employment growth opportunities will require a capacity in science and mathematics. We must equip the next generation for their future, not our past; it is a future highly reliant on science and mathematics literacy. Citizens must be able to ask the important questions and engage in sound and equitable public policy. Science is an essential literacy and we must address the fact that this literacy is neither widely nor equitably distributed and this deficit threatens the quality of life for our nation.

Nine Percent

Science museums—like libraries and other places of informal learning—play a critical role in education. Consider that, by the age of eighteen, a child will have spent, at most, nine percent of his or her lifetime in school. If a child spends about six hours a day in school, for each of the one hundred and eighty days of the school year, he or she will spend little over one thousand hours in school in a year. And that doesn't include homework. And it assumes perfect attendance.

Nine percent of a childhood is a great deal of time for one single activity such as schooling. But from the perspective of examining all opportunities for learning, it's a small number. I consider it commendable that schools have such an impact after only taking nine percent of childhood. But even allowing for sleep, play, and social development, that still leaves a large portion of a child's life that can be filled with joyful learning. The kind of learning that happens with their families, in the community, in libraries, in museums.

Trust

Museums have earned a place of trust in the community. A seminal study in 1999 by Lake Snell Perry & Associates found Americans trust museums above all other sources of objective information—above books and television, and far above newspapers, the Internet, radio, and magazines. Why this high level of trust? Because museums care for our most precious collections, interpret our history, are research-oriented, and they deal in facts. And families follow through with action—one-third of Americans say they have visited an art museum, a history museum, an aquar-

ium, zoo, botanical garden, or science and technology center within the past six months.

I think I can speak for my colleagues across the country when I say that we take that trust very seriously. And we're working to leverage it, and find new ways to increase the quantity and quality of science learning and nurture healthy communities. Not surprisingly, most people's impression of museums is of our exhibit galleries, and we continue to develop exhibits that engage and excite. But some of the most innovative work is being done outside our institutions, in our communities, and beyond.

Relevancy

Relevancy is at the core of what we do. How do we achieve relevancy, and to whom? Museums are always striving to increase the value and reach of our programming to support individual engagement in the sciences—especially through families. Being relevant and interesting to an adult audience, we're expanding the range of those we serve through our exhibits and public programs. At the same time we are working to broaden the diversity of the community we reach both inside our facilities and beyond.

In addition to individuals and families, we've created partnerships that provide relevancy to formal education, at its core a focus on educators, administrators, and the programming that supports student outcomes.

And we're making new strides in our relevancy to policy makers—governing officials, business leaders, foundations, and individual thought leaders in our community who can use our expertise to make informed decisions with respect to public policy.

I'd like to share some examples of partnerships and programs that have been especially innovative, successful, and worthy of replication.

Achieving Relevancy to Individuals: Talking Circles

One of my proudest moments in our museum's galleries was when we opened the world premiere of the RACE exhibit last year. This touring exhibit—created in partnership with the American Anthropological Association will open later this month in Cleveland. It explores three themes: the everyday experience of race, the contemporary science that is challenging common ideas about race, and the history of this idea in the United States. As part of the planning for this exhibition, we created a program of Talking Circles.

Talking Circles, as they were used in the RACE exhibit, are facilitated discussions for groups of 20 or less based on Native American traditions in which all participants are invited to reflect on their experiences in learning about and experiencing race as a factor in their lives and communities. The Department of Corrections in Minnesota has used this format successfully, and we saw it as a way to extend the learning in the exhibit to a group setting. Designed for business, community and government groups, and schools, the RACE Talking Circles are a valuable, nonconfrontational way to explore difficult issues in a safe environment, as well as to learn a valuable communication technique.

The museum offered two private rooms next to the exhibit for groups visiting the RACE exhibit to continue the learning opportunity afforded by the exhibit experience. Because the museum trained Circle Keepers from local United Way agencies to facilitate the discussions those skills are now used in dozens of non-profit agencies across the community, creating an enduring legacy of capacity-building. The results were deeply gratifying—more than 4,000 visitors participated in Talking Circles, and nine out of ten participants would recommend a Talking Circle to others coming to see the exhibit. The Talking Circles were funded in part by an IMLS grant, and we appreciated the opportunity to bring a new form of learning to the museum experience, and one that has gone on to other communities across the country.

I learned how I want to be treated and how others want to be treated. We are not all the same but shouldn't be treated differently. (Age 12, African American/White female)

Great Partners and Great Tix

Museums are always striving to serve as many visitors as possible, and we don't want income to be a barrier. Since 1996, the Science Museum of Minnesota has offered reduced-rate admission to families with limited-incomes. The museum is theirs for a dollar. The Great Tix program encourages them to visit the museum on any day and any time of their choosing.

In 2002, the museum began collaborating with community organizations across the Twin Cities and the state in a program called Great Partners. In exchange for recruiting at least 10 families to sign up for the Great Tix programs, these Great

Partner agencies receive a batch of free vouchers to be used as they wish for their clients, their staffs, or their supporters. Some organizations use the vouchers to bring clients as a group, some distribute them to individuals—we don't care how they're used. We see ourselves as a resource to our community—ALL of our community. The majority of low-income visitors who come the first time through one of our Great Partners then sign up to be a part of the Great Tix program. A second program for families with limited incomes—Great Membership—offers the same benefits as our regular membership, but at half price.

Thanks to the active engagement of the Great Partners the museum is signing up 240 families or individuals a month for the discount cards, and 50 families a month for memberships. And those card holders are using the museum—21,000 parents and children each year, people who would otherwise not visit this museum.

PRISM is also delighted to request a Great Partner status with the Science Museum of Minnesota. The families we work with are very deserving and are struggling to maintain a sense of dignity about their situations. I find it truly gratifying that you have designed this Great Tix program to encourage use of your center by a wider and perhaps more economically diverse audience. Not identifying our families as "different" from any other family visiting your museum will add to their enjoyment and ultimate success of your program. PRISM (People Responding in Social Ministry), Minneapolis

Mentor Buzz

There is tremendous resource in the community in the form of dynamic, experienced adults with a wealth of knowledge to share. Mentor Buzz, a collaboration among the Science Museum of Minnesota and the Mentoring Partnership of Minnesota and GE Foundation, is a unique, web-based program to bring those adults together with youth in search of knowledge and guidance. Mentor Buzz creates online features and resources for mentors and youth, designed to increase exploration and interest in science, technology, engineering, and mathematics (STEM). The mentors and youth engage using Science Buzz, an award-winning website devoted to developing, growing, and sustaining an informal on-line learning community centered on current science topics.

Mentor Buzz builds upon the ongoing efforts of the GE Capital Solutions employee volunteer mentoring program with Minneapolis Roosevelt High School. With funding support from GE, mentors will continue to play a critical role in piloting and evaluating the use and impact of Mentor Buzz. Other GE sites across the country will be invited to participate in a national rollout of Mentor Buzz in 2009 & 2010.

Learning Places

It can be challenging to reach deep into communities to provide support. Learning Places brings learning home—literally. Funded by the National Science Foundation this program hires teenagers from local community organizations serving underserved populations to work in teams to design science learning environments for children. Through this work teen participants bridge the museum and community organization cultures to make science learning accessible to their communities. SMM has recruited and hired teens from community centers in St. Paul, MN that largely serve low-income, African American, Hmong, Somali and Hispanic populations. Once hired, teens receive extensive training and support as they work collaboratively with museum and community partners to design, develop, evaluate and create hands-on activities and environments rich in STEM content for nine after-school centers. The Joe Eriggo award was given to the Learning Places team by Common Bond in fall 2007 in recognition of contributing to community well-being.

CommonBond Communities in St. Paul, a nonprofit that develops and manages affordable housing and supports education and health—was our partner in using their staff of 150 to guide the team of 9 teens who over a year's time engaged more than 150 youth in hands on activities. For instance, one activity used an air tube in which a fan blows air through a vertical plexiglass tube. Children made simple air foils of different shapes to see what would happen when they were dropped into the tube. They made predictions, experimented to see what would happen, and then changed the shape of the object to experiment again.

In this, the final year of the project, the youth team's work will end and the focus will move to supporting 5 small science centers nationally who will draw from lessons learned in the first 3 years and develop their own unique projects. We look forward to helping launch Learning Places at museums including Explora! In Albuquerque, New

Mexico, Headwaters Science Center in Bemidji, Minnesota, Sci-Port Discovery Center, Shreveport, Louisiana, Lower Hudson Valley Challenger Learning Center, Airmont, New York, and the Pacific Science Center in Seattle, Washington.

Collector's Corner

One of the most popular exhibit areas of the Science Museum of Minnesota is a unique participatory program called the Collector's Corner. It is a natural history trading post for kids of all ages where participants can explore natural science by bringing in things they find in nature: rocks, shells, snake skins, skulls and bones, insects, or plant pieces.

Traders tell the museum staff what they know about the objects they bring in and earn points for their objects and their knowledge about them. The more they know, the more points they earn. Traders can then use those points to trade for other natural objects displayed in the Collector's Corner, or they can save their points for a future visit. There are more than 11,000 active traders, with 45% being girls, 55% being boys and most between the ages of 4-14. The Collectors Corner reinforces both children's and adult's natural curiosity about the world, and teaches important lessons about the ethics of collecting, conservation, and environmental stewardship.

As a tribute to its success, the museum is initiating a pilot project to establish several satellite Collector's Corners to be run collaboratively through urban and rural Minnesota libraries. Libraries are the perfect partners for the museum: they are highly popular and accessible destinations for families (including large numbers of under-served families), they are reference repositories, and they boast knowledgeable staff that can help children find more resources. Library administrators are strongly interested in offering more programming related to science, technology, engineering and math, and the Collectors Corner offers a unique opportunity for serving that important public education agenda.

Achieving Relevancy to Educators: Science House: A Resource for Teachers

Our relationship with teachers goes back decades. But we recently started an exciting new chapter in our partnership with formal educators. Science House was created to provide a vibrant, professional home for teachers at the Science Museum of Minnesota. The resource center provides curricular materials loans, formal and informal consultation, professional development program support, and community-building.

In its inaugural year, it has been very well received by participating school districts, and we are confident this program will create fruitful partnerships between the museum and teachers, and among teachers themselves.

Curricular Materials Loans: The museum provides loans of materials that can be used in the classroom, but may not be available to district instructors—materials like 15 medical-school grade Leica compound microscopes, 40 student field microscopes, three 6-inch reflector Orion telescopes, skulls of 120 different animal species, and 184 Vernier probes. Current materials focus on science standards and amplify resources through the Museum that would either not be available (such as de-accessioned artifacts from SMM collections) or be cost-prohibitive from a school or district standpoint.

Informal & Formal Consultation: Teachers can drop-in for support on lesson design, identification of resources, and potential partners or programs. After-school and in-service workshops and seminars on specific topics or grade levels are available for more formal support.

Program Support & Integration: Science House is integrated with professional development programs from our museum and our partner institutions to provide seamless continuity of service. Follow up workshops are vital to incorporating the skills and relationships that begin at Science House.

Social Networking & Community-Building: Science House is a place in which educators can network across grade-levels, schools, districts, and institutions. We strive to support new teachers and promote teacher retention

Initial support from 3M launched the program, and a special state appropriation for teacher professional development has allowed to allow the Museum to expand our discipline focus so math and engineering instructors, as well as science teachers, can be part of our programming.

TRIBES

TRIBES (Teaching Relevant Inquiry-Based Environmental Science) works to increase the number of Native American middle-school students taking science courses and going on to pursue post-secondary science degrees, ultimately to have careers in the science disciplines. In 2004, the museum began working with public schools, tribal colleges, and universities in northern Minnesota on an innovative program to better serve Native American science learners. TRIBES was designed to enhance science teachers' ability to teach inquiry-based science and increase cultural awareness by integrating indigenous ecological knowledge of the Anishinaabe into

science curricula, with the environment of the Headwaters region—the source of the Mississippi River—as the unifying context.

The 24-member cohort of TRIBES teachers met each summer in July for two weeks and on three Saturdays during the school year, usually on the Bemidji State University campus in northern Minnesota. During the summer institutes, faculty from BSU led participants in a variety of field and laboratory investigations, including sessions on cultural knowledge and on classroom practice. School year sessions mostly focused on cultural topics or activities, featuring stories, a day harvesting wild rice, and another day maple sugaring.

The partnership has recently been expanded to include a much broader geographic reach and to include teachers of younger students. The new cohort includes 30 teachers; twenty of the participants are new to the program, 10 are returning. The summer program is now split between Bemidji and Saint Paul, continuing to use the Mississippi River as the central context, now using different points on the river to explore spatial and temporal differences.

Achieving Relevancy to Policy Makers Brighter Futures

We all know there is a period of tremendous opportunity in the first years of a child's life. A new program promises to draw together early childhood efforts in exhibits, research, and public policy in exciting new ways. The Science Museum of Minnesota, partnering with the Center for Early Education and Development at the University of Minnesota is launching Brighter Futures: Public Deliberation about the Science of Early Childhood Development. This ambitious project will use small group conversations, citizen conferences, and public forums, along with a highly interactive 1,600 square-foot, exhibition, and two research studies. We aim to engage policymakers, the general public, and caregivers in conversations around the latest early childhood development research. And as each component is completed, audiences will better understand how environment and experience impact a child's development and what we as a society can do to support our youngest citizens.

Brighter Futures specifically addresses the needs of caregivers in the region who are supporting the young children of a rapidly growing Hmong, Somali, and Liberian immigrant communities. Partnerships are critical to reaching the community, so we are collaborating with Minnesota Head Start and the Minnesota Brain Conference led by the White Earth Band of Ojibwe, to extend our impact. I'm excited about how it can be useful to our visitors and our community, but beyond its impact in Minnesota, the study will shed light on how museums can engage the public in dialogue on science-related issues, and how legislators apply the exhibit and programming experiences to policy. Brighter Futures is driven by an underlying commitment to expanding the civic engagement role around this urgent social issue of early childhood development.

Plotting a Course for the Future

So taken together, what do all these projects mean? Museums are working to take science learning beyond our walls and into communities around the nation, and we're doing it with a guiding philosophy of integrated community involvement.

In 2006, I co-authored a study on education and careers in science, technology, engineering and mathematics (STEM). The report, titled Engagement, Capacity and Continuity: A Trilogy For Student Success, analyzed why successful individual reform efforts have not led to broader increases in students achieving at high levels nor entering science and math oriented careers and identifies three components necessary to increase success in quantitative sciences:

Engagement—an awareness, interest, or motivation (the spark) Capacity—the knowledge and skills to advance in increasingly rigorous subject matter (the skills) Continuity—opportunities, resources, and guidance to support advancement (the pathways)

The report maintained that when any one of the ECC components is missing, student achievement falls off. Essentially, while many programs have supported individual components of engagement, capacity, and continuity, there has never been an effort to integrate all three.

My co-authors and I gave recommendations based on the ECC Trilogy for what educational policy makers, sponsors, curriculum/program directors, evaluators, district/school administrators, teachers, museums and other informal science institutions can do to bring about student success in the sciences and quantitative disciplines in their realm of influence.

That study has helped direct my leadership of the Science Museum of Minnesota, as I've sought the kind of partnerships that can guide students from the earliest awareness of science to gaining the necessary skills and then the fulfillment of the potential as they navigate challenges in academics and careers.

Building Healthy Communities

At every turn, libraries and museums offer the resources to spark imagination, access greater knowledge, and learn where to go next for mastery of skills. The ECC trilogy of success outlines the strategies at the core of how museums and libraries can strengthen their leadership in partnership, and nurture a healthier community.

Museums can and must grow and change, providing real value as part of a larger effort in order to remain relevant. We will never stop being a destination, but must also be a part of the fabric of learning throughout the community—partnerships with libraries, formal learning, community groups. We are committed to being at the forefront of making our communities more scientifically literate, more engaged, and prepared for the challenges of the 21st Century.

Chairwoman McCARTHY. Thank you very much, Mr. Jolly.

I have to say, after hearing your testimony—and I have had the privilege of, because of the position of my job, going into libraries, going into our museums—especially, our children's museums—they are certainly not the museums that I grew up with. Everything is hands-on, opening up the eyes of our young children, and our adults, by the way, when they bring their children to be able to see science physically, and touching.

I find it a just totally amazing. So we are making a good step. We have a long way to go, especially with the young people, and with the way they are learning today versus the way I learned as a child. And we have to keep pace, because the world they are facing—for the economy and the security of this nation—we have to go forward.

And I do believe we are starting that track. And we have got to make sure that we continue. That is our job. And, hopefully, this committee and all the other committees of education will do that.

I would like to start with my first question, as far as Dr. Radice.

You stated in your written testimony that collections are at a risk. What are you doing to ensure that collections are maintained?

And, obviously, with all the flooding that we have seen, the storms that we have seen—not even here in this country, but in other countries—seen things wiped away. I mean, we are not talking about 1 foot, 2 foot. We are talking about extreme flooding. New Orleans is probably a perfect example, when I think about what was lost there in the history of that particular area.

Ms. RADICE. As I mentioned, Madam Chairwoman, we began an initiative, and been very active in something called "Connecting to Collections." And it is more than, you know, a lot of air time about the situation as we found it, but, rather, on-the-ground, practical help.

We have taken our message across the country. We have five national forums that deal with very specific types of conservation issues. In Atlanta, we dealt with special collections—Native American, African American. In Denver, we dealt with how to digitize, and the whole—how to preserve information—especially useful for archives, libraries and, of course, the records of museums, and visual records.

We will be dealing with living collections in San Diego. We will be dealing with job creation and training trustees and training new conservators and people to take care of objects in Buffalo, New York.

But we have also developed a network. I am especially committed to small-to-mid-sized organizations. They don't have the

funds readily available. They might not even have a staff member capable of doing some of the work that is needed for preservation.

So we have developed a network. People get to know each other. We provide materials for reference. Bringing people together in these convocations—now, they have phone numbers. People will take their calls. It is really a very strong grassroots-type of operation.

Also, we have been very fortunate. Bank of America has entered into a partnership with us to give small grants to these smaller organizations. So they can take an object, a book, whatever, that, in a way, synthesizes what that collection is about, and highlight it, restore it, show it to the world. It is about getting engaged and putting this kind of preservation as one of the priorities of collections management.

So, yes, it is a hard row to hoe. And you saw the video. And thank you for presenting it. But we have made some real progress. And the next video, I think, will be even—we will be able to lower some of those figures.

Chairwoman MCCARTHY. That is what we like, going forward.

Ms. RADICE. Yes.

Chairwoman MCCARTHY. Ms. LeBlanc, in your written testimony, you discussed the necessary casework and staff buy-in of your collaborates to achieve program success. Can you describe to us the process and some of the challenges you encountered, and how you overcame those challenges?

When you and I talked several months ago, and the program had, basically, started, I mean, number one, I thought it was brilliant. But if you could go into what the challenges you faced——

Ms. LEBLANC. Sure.

From the very beginning we realized, just before we wrote the proposal, that the development of the partnership was as important as anything else we were doing, because we were a museum entering a system—a government system—that has a certain way of doing things, and its own challenges.

So we wrote the proposal with the county Department of Social Services and Family Court, and spent a lot of time with them in their proposal planning—started to build the relationship with all the department heads, that I talked about, that visited—Family Court judges.

I went to Family Court with that judge to see what that was like. And it was really, emotionally, a very, very tough thing to see. But, also, what I saw was that this Family Court system was really trying to work with a very positive way. And it made it clear to me how strong the need was, and how much they wanted to work with us.

As women came in, and most of the women who have had the children taken away, it is either because of drugs or partners who have been abusive to children. And the women I saw were all—had been in drug programs. And when they came in, all those agencies that are now together in that Welcome Center, were there in the court, and supported the women as they reported that they had had a drug test and that the drug test was, I guess negative, if they haven't had any drugs. And everyone clapped and gave support to the women.

And I was really impressed with the people working in that system, and what they were trying to do, and he changes they were trying to make.

So we worked together on a proposal. And then one of the important things we decided is that we needed to meet every month. We needed to form a joint planning committee and meet every single month. And the head of Social Services made a commitment; Louise Skolnick—Dr. Louise Skolnick, the director—myself. I am part of the meetings.

All those department heads and the Family Court personnel are all part of those monthly meetings. And it is hard to have an afternoon every month, where we all get together, but it builds our relationship and it keeps everything moving, because, as I said, there are a lot of crises with families and overworked caseworkers. And it is hard to stop and really try to do some things differently. So that meeting that we have has been very important.

We have put together our National Advisory Committee, which gives some expertise and, also, some real energy, when we bring them in, for local folks that we are working with. That was really important.

The things I described—some of the programs, as we went along, came out of beginning the work. The redesign of the welcome center—we had thought about it, but hadn't put too much thought into it when we started the program. And it became one of the central things that we are doing.

When we went to visit at—it is—there are two tiny rooms, white walls, bare, a box of toys with no organization—some of them broken, no one keeping them up. And then families come into that, that are already separated from their kids and having difficulty, and don't know what to do when they have a social worker watching them.

So this has been one of the most exciting things that we have been working on. We had our exhibits designer work with their staff, and we did a prototype thing. We did focus groups. And they are installing it now. And there is this giant storytelling chair that parents can sit in. I mean, you press it, it says, "Tell me a story." And there are books there. And kids can crawl underneath, as well, if they are active. And the minute you walk in, it is really—people have described it as being, really, a fun thing that they can start working with their kids on.

There are ceiling murals that a designer painted; a different kind of paint and lighting; furniture that is easy to clean. The other furniture was hard to clean. That was one of the big challenges—was trying to get that supervised visitation at the county to be more positive.

From there, we are working with families that are able to do supervised visitation at the museum.

It is tough to enter that system and try to make change. And we had to be patient with—when things are, you know, preempted or slowed down. And they had to be really committed. And, I have to say, after a year, the relationships are very strong. But it is not the easiest thing we have done, but it is very rewarding.

Chairwoman MCCARTHY. Thank you very much.

My time has expired.

Mr. Davis?

Mr. DAVIS. Thank you, Madam Chairwoman.

And I would like to say, of all the hearings that I have attended, this is one of the best panels that I have had the opportunity to hear from. You have done a wonderful job—great testimonies. Thanks for what you do in your communities.

I would like to start with Dr. Radice, if I may.

You talk about, in your testimony, "IMLS is a primary source of federal support for all the nation's libraries and museums." Other than by financial means, how does IMLS support libraries and museums?

Ms. RADICE. Because of the expertise that is found at the agency, many of our program people are former museum directors or state librarians—we are able to provide assistance that way, which is very practical.

We sponsor a great deal of research. Librarian Zales mentioned the report talking about attendance, and the fact that the Internet and visitation actually help each other. We are engaged in the presentation of materials that can be used, for example, in preservation.

Our Web site is fantastic. Tons and tons of best practices are there. Convening people—it is all about keeping up to date, and I think we do that very, very well. Plus, I am always very proud to say, when you call our agency, you get to talk to people, as opposed to a recorded answer tape.

Mr. DAVIS. Thank you so much.

You stated one of the IMLS goals is to enhance learning and innovation. How do you encourage libraries to incorporate technology, as well as traditional methods in educating children and adults?

Ms. RADICE. Technology is simply part of the daily operation now, whether it is through digital programming or providing up-to-date equipment or training for that. The mention was made of the Laura Bush 21 Program, bringing new librarians in, very—being very supportive of having technological experts in libraries, and in school libraries as well. And, simply, we are just part of looking ahead, as opposed to looking behind.

I share the frustration that Madam Chairwoman has, because the way we went to the library, or the way we learned technology, is a whole different scene. So we try to have some of our younger staff members involved with that.

Mr. DAVIS. Thank you.

Ms. RADICE. You are welcome, sir.

Ms. Nunez, you mentioned the Laura Bush grant. Could you talk to me a little about that—just enhance that a little bit so I can understand it better; how it would help districts across America?

Ms. NUNEZ. Sure.

The grant was received by the School of Information Resources and Library Science. And so they created the Knowledge River program as an institute to recruit Native Americans and Hispanics to matriculate and earn a degree in library science.

So it supported that. It supported students by way of offering scholarships for financial need for students who were, otherwise, unable to, actually, attend and earn a degree. It helped offset the cost of tuition, as well. But it also provides financial support, in

terms of an assistantship in, particularly, library environments. So they are working and earning a stipend, or earning money, being in an information environment.

Mr. DAVIS. Sounds great. Thank you.

Ms. Zales, you mentioned that you have 280,000 readers in the summer. How do you get children—280,000 children in Pennsylvania—interested enough to read in the summer?

Ms. ZALES. Our Summer Reading program is, obviously, very successful. And we are very pleased that the teens that are coming into our program are coming in in larger numbers.

I think it is of great note that, in the city of Philadelphia alone, there were 10,000 teens who are participating in our Summer Reading program. So not only does it have the advantage of increasing their reading skills over the summer, it also has the secondary benefit—it is keeping them engaged in the library, in the safe place.

The Summer Reading program is the very first program that public libraries offered. It is over 100 years old. And it actually started in Pittsburgh, Pennsylvania. So we have history on our side; that there are generations who have participated in Summer Reading, and now have their children interested in it.

I think part of the wonderful appeals of Summer Reading is they chose a very interesting theme every year. And it is a theme that young children and teens can all participate and find something interesting. And it is finding an interesting and engaging topic that will pull teens into the library and get them reading.

Mr. DAVIS. Thank you.

I had one last question. It is for Dr. Jolly.

Thank you. I have an interest in a health and science background myself. I am a respiratory therapist. I own a health-care business.

You talk about the three components necessary to increase success in sciences. Could you expand on that just a little bit, because we are running out of time?

Mr. JOLLY. Certainly.

A few years ago, the General Electric Foundation commissioned several colleagues of mine and myself, including Patricia Campbell, to look at what we knew about what was successful. What did research tell us about successful outcomes for transforming student success in the quantitative disciplines, through programming funded by independent organizations and federal organizations?

We wanted to find out that there was more—what we found out in the first case, was that there was precious little research. A lot of reform in education happens according to what Tom Kibler calls the "pure of heart" model: "If my heart is pure and my intentions are good, I must be doing the right thing." The right thing doesn't always—the pure heart doesn't always lead to good student outcomes.

We found that when we had good student outcomes, generally, the programming that was trying to transform the educational process had one or more of three primary goals showing up. And as we looked at the research, it was even more apparent that those programs that succeeded following one of those three goals, the

program officers supported one of those three goals, the participants thought of those three goals, or sometimes more.

We thought we should look at those goals. And the goals were quite simple. Capacity: Achieving the requisite knowledge and skills to advance to more rigorous disciplinary content. And the National Science Foundation, Office of Systemic Reform, put hundreds of millions of dollars into teacher preparation, curriculum materials, development and other programming to try and allow us to give students the capacity to advance to more rigorous knowledge.

But you can have the finest teacher in the world and the greatest curriculum; if the child believes math is hard and it is not for them, if they are looking out the window instead of attending to the class, it doesn't matter.

And so what students also needed, we found out, was engagement; an orientation to an interest, and a belief in their own efficacy to learn about these areas; knowing that science could be for girls; that science and math could be for any child. And so we have put tens of million dollars into programs like Operation Smart and Head Start. Girl Scouts of America have spent millions to try and get young people engaged.

Today, the secretary of education has a program in New York, Chicago and D.C. aimed at getting young people oriented to and engaged in math and science, because we have to have them interested. We have to have that spark. And if we give them that spark and that interest, and the course and rigor that they have to develop the capacity to move to more rigorous knowledge, then what we need to assure is that they have the more rigorous knowledge; they have the continuity.

We have called it "systemic reform." We have called it many things. Over $1 billion, in the last decade, was spent on this in America.

But the question was: Why does so much success—because all of these things that you fund, of course, we will write a report and say just how successful we were—why is it that all this success doesn't add up to more progress?

And what we found when we looked at the research was that when we did a program for engagement or capacity or continuity, it worked, if, by happenstance, the other dimensions were already there. And what we need is an intentionality that coordinates at the appropriate level for each child, an assurance that they are engaged; that the capacity is there, and that the continuity, whether it is a knowledgeable and caring adult who can help them manage the field, or a curriculum or advisors in school, or the existence of A.P. calculus—that those continuity aspects are also in place.

Let us be certain. If a child doesn't take algebra in eighth grade—and only 27 percent of American students take algebra in eighth grade—they cannot be on track to take A.P. Calculus. And without A.P. calculus, they will not be able to enter into a traditional engineering for 4 years, in which we provide support. That means that three out of four American students are off-track to be engineers before they can spell the word, in eighth grade.

And so we need to engage them; give them an interest, a spark, a joy. Museums and libraries do that well. We need to provide the capacity by supporting the teachers, formal education, parents and

programs that give them the requisite knowledge and skills. And we have to assure that, in their community, is the continuity that will move them along, put them on track for the most successful mathematics.

We know that the number one predictor of college graduation is the number of math courses taken in high school. The top five performing states in America—57 percent of their students are taking algebra in eighth grade. We can make a difference.

And our student-graduation rate from college reaches 79.8 percent in 4 years, for students who have had 4 years of high-school mathematics, regardless of whether that degree is going to be in fine arts, literature, biological sciences, respiratory therapy, or physics.

It is a way to teach children how to think, gain discipline, and have an assurance that is staying in—in China—that trips off the tongue in far too many students—more than in the United States. In the United States, our students will tell you, "Birds of a feather flock together," and, "Opposites attract," and we know both can't be true. In China, they will say, "With knowledge of chemistry, physics and math, I can stand anywhere without fear."

That confidence from being a successful learner comes when our institutions engage them, give them the spark, ignite the curiosity and put them into a system that can help them succeed—engagement, capacity and continuity in every student. Thank you.

Chairwoman MCCARTHY. Thank you.

Ms. Clarke, my colleague from New York?

Ms. CLARKE. Thank you very much, Madam Chair and Ranking Member Platts.

This has been a very engaging hearing. And I am thankful to all of you for coming. I am a beneficiary of a very enriched environment. I happen to represent a district that has the Brooklyn Museum, the Brooklyn Children's Museum, the Brooklyn Jewish Children's Museum, the main branch of the Brooklyn Public Library, and about 12 local branches, as well as the Weeksville Museum.

And born and raised in this district, I was a beneficiary of all of those institutions, with the exception of the Brooklyn Jewish Children's Museum, which is one of our latest additions.

So what we are talking about today is really, really—hits home for me. I was also a former New York City Council member. So I participated in the financing and the growth and development of all of these institutions.

Coming from an environment that is rich, that has a long history of developing cultural institutions, museums and libraries, one of the challenges that I have found for our community is actually not just the preservation and growth and development of programming, but capital improvements. How do we maintain the facilities that house all of these programs, all of these materials?

And so my question to you, Dr. Radice, is: What kind of grants does IMLS provide to support museums and libraries that implement programs for at-risk and disadvantaged communities? And is their preservation extending to capital improvements as well?

Ms. RADICE. Unfortunately, we do not support capital improvements. There are other avenues to pursue that. We often give hints

to people on where they might seek some help. And, certainly, that is a real issue.

With the preservation of collections, has to come good housing for them. You have to have a roof over you that is not going to collapse and is not going to have rain.

We have, throughout the history of this federal agency, been very supportive of all programs that really go down into the communities, all kinds of communities. We also, most recently—it is now 3 years old—have supported a tremendous leadership program called "African American History and Cultural Grants."

These grants are given to institutions—African American institutions—who are not only developing programs that are of special significance, that can be replicated and shared with all museums, but also to help establish a professional track for many of the museum workers, who might not have had that opportunity.

So we are very aware that we have to be engaged at the—right at the beginning, the entry level. And I wish I could give grants to help keep the roof on, but we certainly try to help.

Ms. CLARKE. We have to take a look at that.

Ms. RADICE. Yes, ma'am.

Ms. CLARKE. When you have an institution that is much older, and, perhaps, the population around that institution is changed so you don't have the type of benefactors, it becomes a challenge for the communities to maintain and make sure that these collections that have been around for hundreds of years, in many cases, are maintained in the appropriate environment.

For instance, our Brooklyn Museum has been trying to get a correct HVAC system to make sure that the pieces that they have don't fade away because the humidity or the heat or the—you know, the conditions are not right to maintain some of those older pieces.

So I think this is something that we certainly need to take a look at. I commend you on specializing in areas of collecting, particularly the pieces that reflect the cultural diversity of the environments in which we find many of our cultural institutions.

I am interested, from the rest of the panel—I am sure you all have been seeing that all—I am sure you all are—and seeing that all parts of our communities are included and can share in all that our museums and libraries have to offer.

My question for all witnesses is: What kind of outreach is being done, and should be done to include people who don't traditionally visit museums or libraries. I mean, I have a knowledge of it. Again, I come from a multicultural environment. So, constantly, you are coming in—you have people coming in with English as a second language. You have folks who are immigrants, people who may be relocating back into the community because they were in prison for a certain amount of time, low-income, and seniors.

What strategy is to be used to get them involved? And, just shortly, because I know my time is up.

Chairwoman MCCARTHY. I am going to have to remind the witnesses to try to keep their answers short.

Mr. JOLLY. Madam Chairwoman, Member Clarke, if I may—some of the programs that we have done at the Science Museum of Minnesota include running a youth group which—in one of our groups,

12 young people have 16 languages, other than English, among them. We supported and paid them to develop 16 different language tours of our museum for their community.

We have community advisory boards for all of our communities. We hold the largest Somali collection in the nation—or in the world—the largest public Hmong collection in the world; and celebrate our holidays with our community, treat our communities in the languages that they wish to be introduced to science for; and also helped to create outreach through our ticketing programs to community centers around the state.

Ms. ZALES. If I could answer on behalf of libraries, please, we have recent studies that show, nationwide, that 78 percent of our libraries reported that Spanish is the main non-English language being spoken. And our libraries are responding in fine fashion to that.

Not only are we working with those who are coming into the library to help them with their language skills, but we are catering our collections and tailoring them to have low literacy in English so that they can—or easy-reading materials in English that are at the adult level, so that we can keep adults coming into the library. We are certainly offering our program and our story times in Spanish.

And we are, with the thanks of LSTA funds, investing in language labs, so many of our libraries, as in our schools—we have 15, 20, 30 different languages being spoken, now. And our libraries must respond to that in order to keep the libraries relevant in serving those communities.

Ms. NUNEZ. Good morning.

The Knowledge River program, I think, is the perfect example of what it is doing to increase the workforce from the perspective of the cultural communities. And we are seeing an increase of those libraries delivering services to meet the needs of those constituencies to come into the libraries from a culturally—and a language perspective.

So I think we are increasing the capacity for libraries to serve those communities, particularly through the Knowledge River program.

Ms. LEBLANC. Yes. Recently, we started doing all of our library—flower exhibitions in Spanish, as well as English. We have initiated a kindergarten-readiness program, a bilingual program, for our children about to enter kindergarten, as well as courses for their parents—for low-income families with—who—many of whom, whose children have not attended preschool.

We work with many community agencies, different cultural groups, and do several things with them—give them free passes, again, so that they can come—families can come on their own and not feel like they have to come and say they don't have money. But I also try and give them—the people that are interested—memberships, so that they can develop long-term relationships with the museum.

And some of what you have to look at is what—do your staff speak other languages? Are your staff culturally diverse? Are the images they are seeing in your museum reflective of their experience? And what kind of programs are you doing?

Ms. CLARKE. Thank you.

My colleague, the ranking member of this committee, Mr. Platts?

Mr. PLATTS. Thank you, Madam Chair.

My apologies in not being able to be here at the beginning of the testimony, but I do appreciate all of our witnesses being here to share your knowledge and expertise, especially a fellow Pennsylvanian.

Thank you for being here, representing the great Commonwealth.

I do appreciate the insights shared, and, you know, appreciate the importance of our libraries and our museums; and, maybe, especially, as a parent of a 12-year-old and 9-year-old, in both numerous museum visits over many years now—sometimes my kids would say "too many museum visits," perhaps, depending on what type of museum we are visiting, whether it is a hands-on, engaging for them, or more of a, "Look, don't touch" museum, and more reading and learning.

But we have seen the benefits of those visits, and especially with libraries—both my children have had their own library cards from early on, and have participated from infancy in the Summer Reading program at our local libraries in York and, in fact, just concluded this year's Summer Reading program, documenting their minutes every day of reading.

And I think one of their rewards that they really appreciated was the oldest fair in the United States, York Interstate Fair, continuous operation—and they got some free-ride tickets for their participation in the Summer Reading program. So they not only benefitted from reading, but they got a few rides. I think, Tuesday night, they took advantage of those rides.

So, as a family, we appreciate the importance of both our museums and our libraries. I have seen the benefit of that. And I know we still have a ways to go in educating our fellow citizens—especially, the great, great benefits of reading from early on.

And one of my colleagues from Illinois and I are co-sponsors of the Education Begins at Home Act, which is to help new parents—especially, lower-income, single moms—you know, understand the challenges of parenthood, and how to best do right by their children. And one of those is reading to our infants. And the research we now have in brain development in the 0-to-3 years—and 85 percent of the neurons being developed then.

And I remember sitting in the state capital, not far from our state museum, as a state representative with my, then, probably 6-month-old son, T.J., who is now 12—sitting there, taking a break when he was—spent a lot of time traveling with me those first 10 months—and reading a book to him—a children's book.

And a staff member popped her head in the door and said, "Todd, you don't really think he understands what you are reading, do you?" And I said, "I know he doesn't understand what I am reading to him in the story, but that brain is working and digesting what he is hearing. And that will strengthen him on the reading side."

And then, Dr. Jolly, your emphasis on math and science—equally important that we do better conveying the importance of that foundation.

I had the great blessing, as a student—in the same building as my 12-year-old, who is now attending middle school—it was my junior high, when I went there—of having great math opportunities all the way up through calculus, in high school—matrix and probabilities, statistics—and know how much that benefitted me in my further studies in college and law school, and to this day.

So what you are doing is wonderful. And the importance that, individually, and, then, collectively—that you are bringing to our nation—and, especially, I think, to our future generations—is so important.

So most importantly, I want to just say thank you for your efforts and your leadership in your respective positions, and the benefit you are bringing and achieving.

My one question, in a broad sense—and I know this is not a reauthorization hearing. But I know we will be looking ahead to the importance of reauthorizing the Museum and Library Services Act. Is there any one thing—and I am going to take off the table "more money," because I know that is a given—that there is always a need for additional funding to expand the programs that we know are working, such as the Summer Reading program.

But is there something just to put on the table as we look ahead to strengthening this important act, or other related acts, that any of you want to share that we should just kind of have on the radar as we go ahead next year?

Mr. JOLLY. Member Platts, one of the things that I find that has been very helpful in the last decade has been the rise of reasonable accountability. And that is asking us to evaluate outcomes that really do look at, "How have we transformed who informs our work, who forms our work, and who benefits from our work?"

And adding evaluation, and funding that evaluation within the general grant structure is something that is very valuable to our institution, and helping to create a collective knowledge that informs all of us towards better practices in the future.

Mr. PLATTS. In my understanding that—the importance of that, if you—in requiring that evaluation—that is not an eligible expense under the federal act today?

Mr. JOLLY. It currently is, under many federal-government programs. But we need a practice that will allow for reasonableness in the amount of—and the balance between what program is being funded and what the evaluation is; recognizing that, in some very new and innovative programs, we may need to increase the percentage of our funding which goes towards evaluation.

And we may not need to have higher scrutiny of those that are already proven.

Mr. PLATTS. Okay.

Mr. JOLLY. And so broader flexibility in meeting those accountability guidelines and goals, and greater opportunities to support innovative research on cutting-edge programs; accepting that the very best science will fail before it succeeds.

Mr. PLATTS. Okay. Thank you.

Madam Chair, is it okay—I know I am at my time limit—if—follow up, here—any others?

Ms. RADICE. If I may just add a word, sir?

We are listening. And, in fact, the process of reauthorization is very complex. And so the reason I am being mute is because these are the people who are on the ground. Sometimes when you are very close to something, you can't see the fine-tuning you need to do.

And I would suspect that, as we approach reauthorization—that the stability that IMLS has provided, and the great programs and the way in which it is operated, will stay. But I am sure there are fine-tunings that we will learn from people in the field.

So as you engage in the reauthorization process, I think it is essential to hear from, as they say, "the field"——

Mr. PLATTS. Yes.

Ms. RADICE [continuing]. And from, just citizens, and maybe even from some people who don't go to libraries and museums. What can we do to help them?

Mr. PLATTS. Thank you.

Ms. RADICE. You are welcome.

Mr. PLATTS. Ms. Zales?

Ms. ZALES. We thank the LSTA fund, the IMLS. In Pennsylvania, the funds have been synonymous with innovation. And we are satisfied, all in all, with the administration and reauthorization, and ask that the innovation and the creativity that is made possible through these funds remain a priority.

In Pennsylvania, the LSTA funds have truly been the seed money for the most innovative and sustained programs. And evidence of the successful component of that dimension is, in all cases, those programs went on to be funded by a direct state appropriation to sustain and allow them to grow.

So I underscore the significance of allowing these funds to be used in innovation.

Mr. PLATTS. Okay.

Ms. LEBLANC. I was involved in programs that were funded by IMLS for, maybe 15 years now, and I know that the agency has gone through changes in its guidelines and went through a process of getting a lot of feedback from its community. And I just want to reiterate that that has been very helpful; and that the current guidelines really, I think, support innovation in a way that it didn't emphasize so much before.

Mr. PLATTS. Great.

Thank you, Madam Chair.

And if I could just close with a thank you, personally—not as a parent, in this case, but myself—I commute daily from York, so I spend a lot of time in the car. And the Village Library of Jacobus—our local library that we are members of—a very small community library—is where all of my books on tape or CDs come from—that I survive my 100-mile-each-way commute.

So I, personally, benefit, and my wife and children are there every 2 weeks and pick three of four books for me that I get through over the course of the next few weeks. And that is what allowed me to stay sane on my daily commute here.

So thank you, Madam Chair.

Thank you, again, for your participation, each of you. Thank you.

Chairwoman MCCARTHY. Thank you, Mr. Platts.

Mr. Sarbanes?

Mr. SARBANES. Thank you very much, Madam Chair.

And thank you, to the panel.

I have been scrolling through an email I got here from my staff that lists al the museums and libraries in my district. And I get more and more excited as I am going through the list, because I have been to most of them, but I haven't been to them all. So now I got some tasks ahead of me—make sure I cover those.

A tremendous resource, obviously, to any community, is the libraries and museums that are there. And Baltimore is no exception to that. In fact, the spirit of the city has been lifted in recent years by the expansion of the Enoch Pratt Free Library, with two new branches having opened—brand-new buildings, which had not happened for 30 years. And it reflects a sense of invigoration in the city, which has got us all very excited.

I had two questions; the first is—and this may have been touched on before I came, and, if so, I apologize—but I was just curious—your perspective on free admission to, particularly, museums. I mean, we think of libraries as being free, in most instances. But museums, I know, are experimenting with what "free admission" means in terms of the relationship with the community.

And I thought you would be a terrific group to get a perspective on that—the sort of pros and cons of it.

Ms. RADICE. If I may say, it really depends on the community a little bit, sir, because, in some instances, museums—they just couldn't function if they didn't have some entry fee. Now, there are very creative ways—perhaps having a local business subsidize part of the entry fee, or having a couple days a week be free.

In essence, when you get people through that door, you hope, not only, they are going to experience the importance of being in that place, but, maybe, spend a little money while they are there.

So I agree you can't have the fees so high that once you have walked through that door, you have said, "Well, I have spent it now. I have brought the family. That is it." But developing good business plans and working within your local communities as part of the economic engine of that community—I think helps a great deal.

It is a huge, huge challenge. I certainly agree with you. And when people come to Washington and they get to see the Smithsonian, and it is all free, it is tough to go home. It is tough to go home and pay the entry fee. I know.

Ms. LEBLANC. Yes, our museum receives half of its operating budget from earned income, the biggest portion of which is entry fees; the other half, from various donations.

What we try to do is raise money from businesses, foundations, other kinds of sources to fund access for families and agencies that can't afford to pay the admission fee. And we distribute several thousand free tickets in that way, and establish relationships with groups. But, because of financial pressures, we need to charge the admission fee to people that can afford to pay.

I did a little study from our Visitor Service computer. And the number of people that actually paid the full admission fee was a very small percentage of the number of people that came in. So people are coming at reduced rates, they are coming in for free.

It would be great for everyone to be free, but it is unrealistic if you are not funded by a governmental entity.

Ms. ZALES. If I could speak to the libraries, there is a long tradition and a long philosophy that information in libraries is to be free. It is part of what makes the information in the library a common denominator of information and resources across the commonwealth.

We also know that the library is not free, and a library card is of no charge to residents of Pennsylvania, if you reside in a municipality that contributes to your public library—again, the concept being that if you are participating from your municipality, giving money to your library, those resources are available to you.

Libraries, like most other institutions, have costs. And those costs are increasing, as well. And libraries are trying their best to recover. But libraries in Pennsylvania have, and will remain—a library card will remain free.

Mr. SARBANES. Let me ask you real quick, because my time is going to run out: Where there have been strong partnerships between schools and museums or schools and libraries—what is driving that? Do you find that it is the individual school that—where the partnership sort of emanates from?

Do you find that school systems make a commitment that makes it easier to access and build those partnerships—just quick thoughts, a couple——

Ms. RADICE. I would say all of the above.

Of course, with a school, if you have a dynamic, terrific principal, you are going to have a leader right away who is going to understand those values. But I think the fact that museums and libraries are part of the education system, in general—I think it is a symbiotic relationship. So I think, at all levels, we would like to see that.

Mr. SARBANES. Great.

Thank you all very much.

Chairwoman MCCARTHY. I want to thank everybody for their testimony.

And right before I go into my closing statement, I would like to put a challenge out to all of you. The collaboration, obviously, between all of you who are, in my opinion, educators—yes, in libraries, museums—but, next year, we are going to be reauthorizing "Leave No Child Behind." Obviously, there has been some controversy about it.

But if you had thoughts, especially on math and science, and how we get our young people to be more open to that—and I would appreciate it. I mean, you know, it is just information for us, because everybody here is on the full committee of eduction.

So if you have any outside thoughts on what possibly could go—or how could we even work together a little bit more between our schools and between the libraries and museums—I would appreciate that information.

I want to thank each one of you for coming here today to share with us the work being done by libraries and museums to strengthen our communities. Each of you shared with us strong programs happening across the country, which are encouraging and inspiring.

It is through the continued support and strengthening of communities, and the people living in them, that our nation is growing stronger.

Today, particularly, on 9-11, is a day for us to remember that we must continue to work together to aid our fellow citizens and improve the lives around all of us. Museums and libraries serve as a unique role in this endeavor, and to do it in creative ways unique to each community for which they serve.

I hope that, as people watch this hearing and learn of these programs, that new connections are forged across the country and across the world, to connect people to information, to ideas and to each other.

Again, I want to thank each of you for being here today.

And I thank, to you, my subcommittee members, for their continued dedication and support.

As previously was so ordered, members will have 14 days to submit additional materials for the hearing record. Any member who wishes to submit followup questions, in writing, to the witnesses, should coordinate with the majority staff, within the requested time.

Without objecting, this hearing is adjourned.

[The statement of Mr. Altmire follows:]

Prepared Statement of Hon. Jason Altmire, a Representative in Congress From the State of Pennsylvania

Thank you, Chairwoman McCarthy, for holding this important hearing on the role of museums and libraries in strengthening communities.

Today's hearing will focus on the Institute for Museum and Library Services (IMLS) and the important work they do to help museums and libraries connect people to information and ideas in communities across the country. In my district in western Pennsylvania, IMLS has provided three libraries with grants and, across the state of Pennsylvania, IMLS has provided nearly $6 million for the expansion and development of museum and library services.

Museums and libraries provide our communities with a way to better understand our communities, our nation and our world. People of all ages can visit museums and libraries to gain a better understanding by learning from collections, exhibits and programs that are offered. Museums and libraries are one of the most important resources for education our children and, as we will hear today, offer services that no one else can.

Thank you again, Chairwoman McCarthy, for holding this hearing. I yield back the balance of my time.

[The statement of Mr. Davis of Illinois follows:]

Prepared Statement of Hon. Danny K. Davis, a Representative in Congress From the State of Illinois

Chairwoman McCarthy and Ranking Member Platts, I am pleased that the Subcommittee on Healthy Families and Communities is holding this hearing on how museums and libraries strengthen our communities. The Seventh Congressional District of Illinois is home to some of the greatest museums in the country. As its elected official, I know first hand that these entities serve as integral elements of the fabric of Chicago. In addition to demonstrating how these institutions contribute greatly to our communities, I hope that this hearing will generate suggestions for how lawmakers can improve the ability of these organizations to promote the education of our citizens. For example, are there opportunities within the reauthorization of the Elementary and Secondary Education Act (ESEA) to better support the high-caliber professional development programs operated by these institutions? The Chicago Public Library receives 92% of its funding from the City of Chicago and 8% from the State of Illinois, receiving minimal federal assistance. As Congress examines ESEA, are there provisions that can be adjusted to support public libraries in

their efforts to educate the young and old? Can we develop ways to integrate the museums and libraries in improving our curriculum to better engage students to prevent drop outs? Are there changes to the Institute of Museum and Library Services Act that could facilitate community programming? Given the remarkable works taking place in Chicago, I want to take an opportunity to describe some of the successful programs operating in Chicago. I hope that this sample of programs offered in Chicago will help policymakers understand the fundamental value of these efforts. Thank you.

Adler Planetarium

The Adler Planetarium is committed to developing and implementing educational initiatives aimed at capturing children's interest in science at critical moments in their intellectual development. It offers an array of engaging programs, such as Astro-Science Workshops, Educational Camps, Scouts in Space Programs, and Professional Development Workshops for teachers. The philosophy connecting these programs is that there is amazing potential for transformation within the classroom and that developing teachers' skills in scientific disciplines and inquiry-based learning methodologies that are aligned with the Illinois Learning Standards will nurture and unleash this potential. The Adler's goal is to equip students with basic knowledge, skills and investigative strategies from the scientific world so they can succeed in school and the future workforce and understand the relevance of science in their daily lives.

The Adler offers a variety of programs to support quality science education in Illinois and across the country. These include:

Teacher Professional Development Workshops to help teachers further their knowledge of the science concepts they are teaching and equip them with hands-on learning techniques to use in the classroom. During the 2007-2008 school year, the Adler provided 18 teacher professional development workshops, which attracted 1,034 from nearly 180 Illinois schools.

Distance Learning Programs via the Adler's website and videoconferencing sessions, such as Ask the Expert, give students opportunities to ask questions of museum astronomers. Nine hundred students at schools outside Illinois participated in one of 36 videoconferencing programs during the 2007-2008 school year.

Classroom Kits and Web-based Educational Resources for teachers that include everything they need to implement the hands-on learning techniques and classroom experiments demonstrated during Adler teacher professional development workshops.

A Pilot 5-week Earth & Space Science Unit developed at the request of Loyola University Chicago to serve as part of the 11th grade physics course. The unit will be divided between earth and space topics and encompass a subset of the Illinois earth and space science learning standards. With oversight from Loyola, Adler education staff and astronomers also will provide training and professional development for science teachers using the unit. The Earth & Space Science Unit will encompass two and one-half weeks of astronomy and two and one-half weeks of earth science curriculum. This project will have district-wide impact, support the Chicago Public Schools' efforts to improve high school curriculum, and better prepare students for college.

Chicago Children's Museum

The mission of Chicago Children's Museum is to create a community where play and learning connect. With nearly 800,000 annual visitors within the museum and in programs throughout Chicago, Chicago Children's Museum is now the second most-visited children's museum in the country and the fifth most visited museum in Chicago. Collaborating with 400 community partners, a priority of Chicago Children's Museum is to represent and reach communities throughout Chicago to provide families with resources and access opportunities.

The museum engages children and adults in culturally sensitive, first-person programs that foster an excitement for the arts, science, literacy and diverse cultures. This work comes alive in exhibits such as My Museum. For this exhibit, Chicago Children's Museum partnered with Street-Level Youth Media to unveil a new component "My Community Matters," an inspiring audio/video compilation of children's first-person perspectives about their own communities.

Chicago Children's Museum strengthens families through its implementation of programming in underserved areas and access opportunities for those in need. In ArtReach, an after-school, intergenerational program, museum educators offer dynamic, high-quality art instruction with a strong literacy component. ArtReach provides children and their families the opportunity to collaborate and learn together, and books and materials to extend the experience at home.

To empower children from an early age to celebrate each other's similarities and differences, Chicago Children's Museum focuses on anti-bias education, which allows children to develop empathy, critical thinking skills, a comfort level with diversity, and a confident self-identity. Through programs like Passport to the World, the museum exposes visitors to a rich variety of people, beliefs and cultures to not only break down stereotypes, but also to help children and families build a strong and confident self-identity and an informed and proud group identity. Now in its 10th year, Passport is an opportunity for communities to explore and showcase the essence of their culture for the education of their own children and the children of Chicago.

Chicago Children's Museum's Student Programs offer opportunities for pre-kindergarten through 5th grade students to participate in workshops facilitated by museum educators either at Chicago Children's Museum or directly in schools. All workshops are linked to state goals and standards and are intended to complement classroom curriculum. In workshops, such as smART Spaces, the Chicago Children's Museum educators help teachers and students turn their classrooms into a vibrant art studio, where young students re-shape, re-build, and re-invent everyday objects.

A collaboration between the museum and community partners, Chicago Children's Museum's Initiatives for Latino and African-American Communities create unique, playful learning experiences for educators, community organizations, children, and families. Annually, these Initiatives engage thousands of children and adults in significant creative, cultural, and educational activities. Through these Initiatives, the museum offers Community Resource Fairs, which engage families in performances and workshops while connecting parents and caregivers with important resources in their community to support and strengthen families.

The Chicago Public Library

The Chicago Public Library is comprised of 79 neighborhood libraries which serve 2.9 million Chicagoans as well as residents of more than 200 surrounding Illinois towns and communities through reciprocal borrowing arrangements. More than 1.1 million people visit Chicago Public Libraries in person each month and more than 1 million visit its website each month to find books and other library materials in more than 40 languages; events; programs; and online research through more than 70 databases in various subject areas. In 2007, the Chicago Public Library provided more than 3.8 million free one hour Internet sessions and circulated more than 7.7 million items. The Library offers a variety of programs and services to meet the developmental needs of residents:

Preschool Children: The Library offers instruction, special book and alphabet collections, and lapsit story times for teachers, parents and caregivers that emphasize the importance of reading aloud daily to children from birth in order to prepare students to enter kindergarten ready to read. Also, there are collection development workshops for Head Start and pre-K teachers and special lapsit story times and preliteracy programs for infants and toddlers in multiple libraries.

School Age Children: The Library's annual summer reading program is a core service to the community, serving more than 49,000 Chicago children who read more than 1.2 million books in 2008. In addition, science and conservation programs were taught in every library by educators from the City's Department of the Environment, the Museum of Science and Industry, and Garfield Park Conservatory. The Teacher in the Library program provides certified teachers to work with students on homework in 47 branch libraries everyday after school.

Teens: The Library offers a few key programs for teens. Teen Volume provides reading, writing and financial literacy workshops for teens. There also are special book collections of fiction and nonfiction geared to teens, and the Readers Theater workshops provide teens an opportunity to adapt and present content from popular fiction for audiences citywide.

Adults: Multiple programs help engage adults in reading and learning. For example, the One Book One Chicago program is a citywide reading initiative presented twice a year that is designed to encourage all Chicagoans from high school through senior citizens to read, discuss and attend cultural programs about the same book. Similar programs now offered in more than 150 cities around the world. The Museum Passports program allows library cardholders to check out free family admission passes to any of Chicago's museums and cultural institutions. This service is key to providing cultural opportunities to Chicago's citizens. Similarly, the Words and Music program improves access to classical music by distributing thousands of free lawn admission passes to Ravinia Music Festival's summer classical music programs. The Library also offers Adult Book Discussion Groups that meet monthly in more than 50 branches, plus a special Summer Reads for Adults program that attracted more than 5000 participants in 2008. Finally, the Money Smarts program

provides free financial literacy classes for adults and families citywide, addressing topics such as money management, credit cleanup, home buying, investing and saving for college.

Chicago Zoological Society's Brookfield Zoo

Families throughout Chicagoland know that Chicago Zoological Society's Brookfield Zoo provides experiences and memories that can last a lifetime. These memories make it a valued community institution that provides unique educational experiences that foster connections with wildlife and nature. In 2007, 250,000 students participated in field trips to Brookfield Zoo. With almost 75 years of conservation leadership, both Chicago Zoological Society and Brookfield Zoo are sources of pride for our community. Less understood is that the Brookfield Zoo is a valuable community institution that employs hundreds of local residents and generates an economic ripple effect throughout Chicago and Illinois. In 2007, with a budget of $56.3 million, Chicago Zoological Society employed 1,124 people with a total of $53.9 million in wages.

Chicago Zoological education and community programs positively impact children and families throughout Cook County. These programs supplement existing science curricula for students and enhance the capacity and professional credentials of teachers. All content is aligned to Chicago Math and Science Initiative Scope and Sequence K-8 and Illinois State Learning Standards. The Chicago Zoological Society's School, Group, and Teacher Programs are divided into three major service delivery areas:

School Programs offer classes for students from preschool through high school. The Connections series of classes explores a wide array of topics, including animal survival, critter coverings, wetland wonders, animal behaviors, ecosystems, and primate populations. Classroom presentations offer hands on experiences, experiments, songs, live animals, and expert facilitators. Brookfield Zoo is used as a living classroom to offer engage students in animals and conservation. In 2007, almost 19,500 students participated in Connections series at Brookfield Zoo. As part of the School Programs, inclusion is a focus. Several classes are designed with inclusion students specifically in mind; especially Every Student is a Scientist. In 2001, the program increased outreach to Chicago Public School as well as deepened our relationships with individual schools. Additionally, two programs, Good Works and Bridges, allow special needs citizens volunteer and work opportunities at the Zoo.

Teacher Programs offer unique learning experiences that enrich educators' classroom curricula. Workshops, classes, exhibit previews, and Zoo experiences all provide professional development opportunities for teachers. As an approved Illinois State Board of Education provider, continuing education credits are offered. Graduate and undergraduate credits are offered through an academic partnership with Aurora University, National Louis University, and Triton College. In 2007, 1,265 teachers participated in Chicago Zoological Society teacher training programs that annually will indirectly reach at least 38,000 students.

The School Partnership Program is a unique partnership with Riverside-Brookfield High School. An interdisciplinary curriculum for freshman combines algebra, biology, English, and physical education while focusing on local environmental issues and environmental literacy. Brookfield Zoo assists with coordination, science expertise, and the use of the Zoo as a living classroom. Students experience a coordinated approach to learning while enjoying such adventures as kayaking, rock climbing, fishing, orienteering, and water quality analysis.

DuSable Museum of African American History

The DuSable Museum of African American History is dedicated to the collection, documentation, preservation, interpretation and dissemination of the history and culture of Africans and Americans of African descent. Through its exhibitions, archives and a diverse array of education programs, the DuSable Museum seeks to interpret and illuminate their experiences and contributions to American and world history, culture and art. In fulfilling its mission, DuSable Museum presents continuing and special exhibits and installations, interpretive and educational programs including film screenings, theatre performances, concerts, lectures, and several special events each year. Public programs interpret exhibitions and/or celebrate important figures, events, periods and themes in African American history and elements of African culture. The DuSable Museum of African American History is the first museum of its type in the country and is the only major independent institution in Chicago established to preserve and interpret the historical experiences and achievements of African Americans. All of its programs are produced for underserved communities surrounding the Museum. They include:

Martinmas Day/King Day is a weekend tribute in film and documentary screenings and performances that celebrate the life and legacy of Dr. Martin Luther King Jr.

Juneteenth Celebration commemorates the 1863 Emancipation Proclamation.

Annual Arts and Crafts Festival is an outdoor exposition of visual art by Chicago artists and artisans coupled with performances and an activities pavilion for children.

Penny Cinema Series offers year-round screenings of youth-oriented films and videos.

Kwanzaa Celebration examines and celebrates a family-focused observance of the year-end African American cultural holiday. In addition, there is a Kwanzaa Children's Penny Cinema Series—a special collection of films that celebrate and discuss the origins and values of the Kwanzaa season through traditional sounds of West Africa.

Youth Docents Program trains high school and college students as gallery guides.

African Storytelling involves weekday presentations of African fables, proverbs, and legends designed for younger children led by local storytellers.

African Rhythm Series offers weekday demonstration workshops on the music and dances of various African cultures and their derivations in the Americas.

Good Greens highlights the vibrant cultural tradition of African Americans through good food and food for thought, authorized by the passage of the 2008 Farm Bill by Congress, which included historic provisions for urban communities.

Youth Advisory Program helps underrepresented high school students obtain work-based learning competencies, educational enrichment and leadership skills, along with tour guide and diversity training while gaining insight as to how museums operate.

The Field Museum

The Field Museum was established in 1893 to expand scientific knowledge about the earth and its peoples and to disseminate that knowledge to the public. The Field Museum continues to pursue these goals today through a variety of programs designed to foster deep personal interactions with the awe-inspiring, intricate realities of the natural world. Serving 1.5 million people annually, the Field Museum brings diverse communities within Chicago together to learn about conservation, biodiversity, and the history of life on earth. The Field's activities include:

Education. The Field has a long-standing commitment to education. In 2008, its education department offered approximately 4,000 public programs that served over 700,000 people in 2008. In addition to its exhibits, the Field provides numerous other innovative educational programs that strengthen the Chicago community. For example, The Harris Educational Loan Center has served millions of Illinois school children and aided thousands of teachers in enhancing basic science education since 1911. The Center delivers collection materials and science curricula to classrooms at little to no charge. The Center is the longest-running and most comprehensive museum educational outreach program of its kind in the U.S., benefiting more than 250,000 students annually. Dozin' with the Dinos has provided an overnight adventure that provides family activities, lectures, tours, and performances for almost 20 years. Guests explore museum exhibits, such as ancient Egypt by flashlight and Sue the T. Rex, and sleep near popular exhibits. The High School Transformation Project improves student achievement and graduation rates at Chicago Public Schools by developing high-caliber curricula and professional development programs, constituting a vital partner in urban education reform. In collaboration with the Illinois Institute of Technology and the Chicago Public Schools, the Field develops engaging, inquiry-based curricula in the areas of biology, chemistry, and physics.

Conservation. The Field Museum maintains a comprehensive commitment to science-based conservation. Its Environment, Culture and Conservation department (ECCo) was established in 1994 to help deploy The Field Museum's collections, scientific research, and educational resources to the immediate conservation needs at local, national, and international levels. Successful programs include: (1) collaboration projects with local and regional governments and others to create new and self-sustaining conservation parks (Chicago, Peru, Guatemala) to preserve endangered biospheres and help address global ecological challenges; (2) conservation education programs that engage local students in hands-on restoration stations at three sites: Wolf Lake, Eggers Woods, and Hammond, IN; and (3) the "Cultural Connections" program, which is a partnership of ethnic museums and cultural centers that is engaged in exploring common cultural themes and experiences in Chicago's vastly diverse urban cultural fabric.

Basic Science and Research. The Field is a world-class center for collections-based scientific research. These collections are the core and essence of the Museum and contain the raw data that allow us to trace the history of the earth through the complex waves of evolutionary development of plant and animal life. The Field employs over 200 scientists, and houses more than 24 million scientific specimens. It is an international leader in research related to evolutionary biology, molecular systematics, paleontology, archaeology and ethnography.

Museum of Science and Industry

The Museum of Science and Industry's vision is to inspire and motivate all children to reach their full potential in the fields of science, technology, medicine and engineering. The new Center for the Advancement of Science Education goes beyond the Museum walls into schools and community organizations across the Chicago area. The Center's programs empower teachers, engage the community and excite students. Programs are designed to provide support to teachers, reach children in a variety of settings, and make it easy to participate. The Center offers programs through three divisions: The Institute for Quality Science Teaching; Community Initiatives; and Student Experiences.

The Institute for Quality Science Teaching helps educators teach science with greater passion and confidence. Professional development workshops increase teachers' knowledge of science, improve their teaching skills and demonstrate how to use Museum programs and exhibits to enhance science curriculum. Approximately 250 teachers participate in workshops annually, ultimately impacting science education for about 10,000 students each year. Workshops are offered at no cost to teachers, who typically work in Chicago Public Schools. The program targets schools most in need of resources, with 42 of the 50 schools that participated in the 2007-08 year-long workshop series primarily serving low-income children.

Community Initiatives expand the Museum's reach by providing children from diverse backgrounds with early exposure to exciting ideas, opportunities and career paths. Demand for these programs is great, and there are waiting lists for acceptance. The After-school Science Minors Clubs were developed to help increase science literacy and increase interest in science in underserved Chicago neighborhoods. The Museum partners with schools and community-based organizations to provide science clubs to about 4,000 8- to 13-year-olds. Currently, there are 36 clubs throughout the Chicago region. The Science Minors youth development program targets 14- to 17-year-olds in underserved communities and provides the opportunity to learn about science, meet scientists, develop public speaking skills and earn service-learning hours. Three sessions each school year involve 45 students each time. Since its debut in 2003, about 400 teens have participated. The Science Achievers program allows teens who have completed Science Minors to deepen their work with the Museum and prepare for college and careers. Students participate in internships, mentor new classes of Science Minors and facilitate science clubs. About 100 students are currently participating. All 23 Science Achievers who graduated from high school last spring are attending college this fall with full or partial scholarships.

The Student Experiences program invite nearly 300,000 students on field trips each year to experience the passion and thrill of scientific discovery. Beyond great, interactive Museum exhibits, dedicated Learning Labs provide facilitated learning experiences that allow students to explore science in exciting ways. About 12,000 students each year in grades 3 through 12 participate in hands-on lab activities that are aligned with Illinois Learning Standards in science. Labs have pre- and post-visit activities along with additional resources to enhance what students learn. Since the program debuted in 2003, more than 10,000 students have participated. The Museum of Science and Industry's Programs are evaluated routinely with strong outcomes. For example, a 2007 evaluation of Learning Lab Programs showed that 85% of teachers were satisfied with the programs and students participation and motivation improved in the classroom.

The Shedd Aquarium

Shedd Aquarium has served Chicago communities for more than 75 years. Its philosophy is that animals connect an individual to the living world, inspiring one to make a difference. Shedd Aquarium fosters this ethic by building peoples' appreciation, learning and understanding of the aquatic systems in their own neighborhoods and beyond; strengthening science literacy; and encouraging direct conservation action. The Shedd offers many wonderful programs that strengthen the Chicago community:

The Neighborhood Initiatives project creates partnerships with community organizations that serve at-risk youth in afterschool settings to provide intense edu-

cational programming concerning local environments, eventually leading to self-sustaining stewardship programs, including beach and park clean-ups and the restoration of native plants.

The Park Voyagers program is a collaborative effort with Chicago Park District since 1997 to provide education programming for families across the city as part a three-year cycle designed to increase engagement with and use of museums in the Chicago area. It equips children for full participation in the civic and cultural life in the city of Chicago and helps families gain confidence with using museums as educational and recreational resources.

Student Mentoring Programs help students explore career interests in aquatic science, animal care and conservation, as well as receive academic and social support from like-minded peers and trained staff. Students from diverse backgrounds participate in these programs beginning with lower impact experiences, such as an after school club, and then deepening their engagement with Shedd through intensive field programs on the Great Lakes, in the Bahamas and internationally.

Teacher Mentoring Programs help teachers learn how to engage students in learning science via hands-on exercises. After participating in this program, teachers are more likely to incorporate hands-on science investigations into their teaching strategies and to rely less on textbooks as their sole means of teaching science. Approximately 200 public school teachers in 11 Chicago Public Schools participate in this three-year program.

Community Festival Programming allows the Shedd to engage Chicagoans about issues facing the Great Lakes at events and community festivals, such as the Chicago Folk and Roots Festival and the Fourth Annual Great Lakes Surf Luau. Conversation topics include sustainable water use and maintaining water quality, as well as stresses on the lakes from invasive species and habitat destruction. Tools to help community members monitor their water use, such as shower timers and rain gauges, are given away.

Sustainable Practices Technical Assistance programming assists a number of Chicago businesses and nonprofits (e.g., museums, law firms, sports stadiums) in their efforts to reduce energy costs and waste production through green practices. The Right Bite program works with local seafood wholesalers, restaurants, catering and retail outlets, and culinary schools to provide more sustainable and healthy seafood options to consumers in the Chicago market.

[The statement of Mr. Davis of Tennessee follows:]

Prepared Statement of Hon. David Davis, a Representative in Congress From the State of Tennessee

Thank you Madame Chairwoman, good morning, and let me extend a warm welcome to our distinguished panel of witnesses.

Before we begin, I'd like to take a moment to reflect on the somber anniversary being marked today. Seven years ago, our nation was forever changed by the murderous acts of a band of terrorists determined to undermine our very way of life. I'm proud of how our nation responded, with selfless acts of patriotism and courage, and a determination to maintain our freedom and defeat those who attack our citizens and our values. As we take this opportunity today to look at the institutions that strengthen our communities, we must all remember that those strong communities have stood in the face of terrorism and maintained the power of the American spirit.

We are here early this morning to discuss the tremendous roles that museums and libraries play in strengthening the nation's local communities. I particularly look forward to hearing from the Institute for Museum and Library Services who will discuss their support for IMLS programs and how they assist various museum and libraries with achieving their missions and goals.

Our nation's museums and libraries have historically played a vital role in helping society experience, explore, discover, and make sense of the ever changing world. Today, that role is more essential than ever. Through building technological infrastructure and strengthening community relationships, museums and libraries can offer the public unprecedented access and expertise in transforming information overload into knowledge.

In many communities across America, the local library is the only place people of all ages and backgrounds can find, and freely use, a diverse set of resources, with the expert guidance of librarians. And far too often, the hometown library serves as the only public access to the Internet.

Not to be left out, the treasures of our nation's museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artifacts and specimens, which they hold in trust for society.

As you know madam chairwoman, I am sitting in today for Mr. Platts, and I would like to ask unanimous consent to submit his opening statement for the record. Once again, I want to thank our witnesses for being here to discuss this important topic. I look forward to your testimony. Thank you Chairwoman McCarthy, and I yield back.

[Questions for the record and their subsequent responses follow:]

U.S. CONGRESS,
Washington, DC, September 17, 2008.

DR. ERIC J. JOLLY, PH.D., *President,*
Science Museum of Minnesota, Saint Paul, MN.

DEAR DR. JOLLY: Thank you for testifying at the September 11, 2008 hearing of the Committee on Education and Labor on "Examining the Role of Museums and Libraries in Strengthening Communities."

Representative Carolyn McCarthy (D-NY), chairwoman of the Healthy Families and Communities Subcommittee has asked that you respond in writing to the following questions:

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

2. In your written testimony you describe many collaborations that your museum has in your community, in your state, and across the nation, including with corporations, non-profits, and schools. What efforts do you put forth to reach out to these organizations and what do you do to share lessons learned in such connections and collaborations with other museums and libraries?

3. You stated in your testimony that incorporating relevant information into your museum causes people to attend. How do you decide what is relevant and what is not and to whom?

Please send an electronic version of your written response to the questions to the Committee staff by close of business on Tuesday, September 23, 2008—the date on which the hearing record will close. If you have any questions, please do not hesitate to contact the Committee.

Sincerely,

GEORGE MILLER,
Chairman.

Dr. Jolly's Answers to Questions Submitted

Chairwoman McCarthy, Ranking Member Platts, and members of the subcommittee, thank you for the opportunity to provide additional information about the important role that museums and libraries can play in strengthening our communities.

I am pleased to offer the following comments in response to the three questions posed by Representative McCarthy:

1. Please describe how museums and libraries can work together with Congress, schools and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

2. In your written testimony you describe many collaborations that your museum has in your community, in your state, and across the nation, including with corporations, non-profits, and schools. What efforts do you put forth to reach out to these organizations and what do you do to share lessons learned in such connections and collaborations with other museums and libraries?

3. You stated in your testimony that incorporating relevant information into your museum causes people to attend. How do you decide what is relevant and what is not and to whom?

Q1: Please describe how museums and libraries can work together with Congress, schools and other stakeholders to improve math and science education both inside

and outside the classroom in the context of the reauthorization of the Elementary and Secondary Act of 1965, better known as NCLB. If you have thoughts outside NCLB those are also welcome.

As places of informal learning, museums and libraries are uniquely positioned to spark children's excitement about science and math through hands-on learning that ties directly back to classroom lessons, to local and national standards in math and science, and to 21st century learning skills. Museums are natural partners with school districts to substantially increase the level and frequency of professional development opportunities for in-service teachers.

According to the Institute of Electrical and Electronics Engineers, one in four engineers directly attribute their career choice to museum experiences as a child.

In response to declining student interest and achievement in the STEM (Science, Technology, Engineering and Mathematics) disciplines, some science museums, like the Science Museum of Minnesota, are raising the bar on the scope and rigor of their education initiatives, both in the classroom and in after school, weekend and summer programs. We have increased our level of intentionality, built infrastructure to conduct rigorous evaluation of our efforts, and launched initiatives that serve individual students and teachers, entire districts, and cross-district collaborations and networking. The National Council of Teachers of Mathematics has recognized these efforts, and our work was featured in the cover article of NCTM's Teaching Children Mathematics in February 2007.

We know that it is not enough simply to repackage our existing cadre of school programs; we must rethink, recreate and revitalize them.

NCLB funding—should it be expanded to include experiences offered by museums and libraries—could play an important role in giving students access to these critical out-of-school enrichment experiences, provided that the programs can demonstrate they meet the following criteria:

- Direct ties to the relevant standards.
- Existing and ongoing professional evaluation.
- Connections to classroom practice.

Partnerships with school systems are critical for museums and NCLB could support those connections. A broadening of NCLB funding guidelines could also support programs that help develop high-performing science and math teachers. It is those teachers who inform and inspire the next generations of science learners.

We are doing just that at the Science Museum of Minnesota with efforts that are closely tied to a vision of STEM education that is driven by state and national standards.

Example: MUSE Project

Materials & Understanding for STEM Educators (MUSE) in Minnesota is a statewide education initiative in STEM. MUSE in Minnesota is driven by a vision of a STEM-literate Minnesota citizenry and a mission to promote rigorous STEM education for all and eliminate the racial achievement gap. MUSE encompasses a unified program of change focused on 1) providing material and intellectual support for STEM educators through Science House, home of the Museum's Teacher Resource Center and related programs, and 2) the expansion and support of middle school math and science initiatives, including professional development for STEM educators, district leaders and university faculty and expanded outreach programs in classrooms throughout Minnesota.

MUSE is funded by the Minnesota State Legislature with the Minnesota Department of Education, initiated through support from 3M and Medtronic, both of which continue to provide funding.

MUSE is given meaning through a set of Guiding Principles:

- STEM Integration: Science is the study of the natural world using scientific habits of mind. It creates an authentic context for the development and application of mathematical problem solving. Mathematics is the study of pattern and abstraction and allows us to see complex relationships in the natural world and to make powerful, accurate predictions. Engineering and Technology use the outputs of science and mathematics to solve issues and problems for society. In addition, they produce instruments and process that further scientific and mathematical inquiry.
- Effort-Based Learning: Learning is the arbiter of success. Learners' beliefs and theories about intelligence greatly influence the kinds of goals they set and effort they employ. Incremental self-theories of intelligence—one can get smarter through effort—are essential in teaching, learning, and doing STEM.
- Equity and Access: Closing the racial achievement gap is an imperative for Minnesota's workforce, economic health and civic participation. Access involves implementing culturally relevant STEM curricula and culturally competent instruction for Minnesota's increasingly diverse students.

• Systems-Based Approaches: Meeting the Minnesota Academic Standards in Science involves vertical integration of concepts across grade levels, coherency across schools and within STEM, and sensitivity to local contexts and resources.

Q2: In your written testimony you describe many collaborations that your museum has in your community, in your state, and across the nation, including with corporations, non-profits, and schools. What efforts do you put forth to reach out to these organizations and what do you do to share lessons learned in such connections and collaborations with other museums and libraries?

We approach our work with a set of values that includes collaboration among our partners to advance our shared missions and goals. Most of our work is done in partnership with others.

Examples of partner organizations and individuals

• Organizations: more than 100 community-based science organizations across the state, 100 museums across the country involved in our nano science education collaborative, and professional associations such as:
• American Association of Museums
• American Association for the Advancement of Science
• Association of Science-Technology Centers
• Mentoring Partnership of Minnesota
• National Center for Earth-Surface Dynamics
• National Council of Teachers of Mathematics
• National Science Teachers Association
• SciMath MN (Science and Math for Minnesota)
• University of Minnesota
• Individuals: community advisers and committees, STEM content experts, and 35,000 member households
• Businesses: 3M, Flint Hills Resources, GE Foundation, Medtronic
• Government: Minnesota State Department of Education, Department of Natural Resources, National Park Service, National Science Foundation

Openly sharing our work and lessons learned is another of our values. We work logically and consistently with a wide range of partner organizations to achieve common goals. We do so in a number of ways:

• Our leadership in the Nanoscale Informal Science Education Network (NISE Network) connects us to hundreds of museums, science centers, research centers and universities across the country that are learning together how to engage the public in the ever advancing field of nano science and technology.

• Using new technologies, like the web, to create places for conversation and information sharing. Science Buzz, our current science, social-network based website, has build an online community of 70,000 to 100,000 unique visitors per month who engage in dialog about current science topics and events.Participation in conferences, such as the Association of Science-Technology Centers, the American Association of Museums, the Visitor Studies Association, the American Educational Research Association, the National Association for Research in Science Teaching and the International Conference of the Learning Sciences, as well as regional museum and education research conferences.

• Articles in professional publications and journals, the Association of Science-Technology Center's ASTC Dimensions, Society for Advancement of Chicanos and Native Americans in Science's SACNAS News, Science Education, Visitor Studies, and Museums and Social Issues

• Speeches and networking events at the conferences identified above as well as the National Coalition for After-School Science, the National Council of Supervisors of Mathematics, National Science Teachers Association and the National Council of Teachers of Mathematics.

• Hosting the Experiment Bench Workshop, which extended the field's efforts to engage the public in calculus, other complex mathematics, and wet lab experiments.

• Hosting conferences that support national science learning efforts, such as NSF's Science Technology Centers Conference, and the upcoming NIH Science Education Partnership Awards Directors meeting.

• Participation on national task forces/activities, including the IMLS Youth Action Committee, National Academy of Science's Study Panels, and NSF, IMLS and HHMI review panels.

• Partnerships with other organizations, such as local library systems, University of Minnesota, Mentoring Partnership of Minnesota, local youth-serving agencies, and various museums across the country.

• Hosting conferences on highly relevant issues:
• 2006 Governor's Roundtable and Summit on STEM education
• 2008 Nano Science

• 2002 conference on the public understanding of research
• 2009 Workshop to be co-sponsored with SciMath MN on the analysis of the TIMMS data

Proof of Concept

Perhaps the most intriguing way we share information is through projects and partnerships that are "proof of concept" models. We create a pilot program and build upon it through community and business partnerships. Once the concept has proven to be successful, we can then customize expand the program to a regional, statewide, national or even international scale.

Here is a sample of two "proof of concept" programs currently in progress:

• Proof of Concept: Mentor Buzz

In the current 2008-09 school year, the Science Museum of Minnesota is conducting two pilot programs around Mentor Buzz, a unique web-based resource for mentors and youth that is designed to increase exploration and interest in STEM disciples. 500 student/mentor pairs will test the program, provide feedback and demonstrate the impact the program has on student/mentor pairs. Information gathered during the pilot will be used to launch a national roll out in Fall of 2009. Mentor Buzz is designed to augment established mentoring programs by providing content and engagement experiences that are specific to STEM disciplines. Because of the web-based nature of Mentor Buzz, and its tie to existing successful mentoring programs, the potential for growth and expansion after the national roll out is virtually unlimited.

• Proof of Concept: Collector's Corner

The Science Museum of Minnesota is initiating a pilot project to test the efficacy of placing a version of the museum's natural history trading post called Collector's Corner into a community library. This program will engage youth of all ages to explore natural science by bringing in and learning about things they find in nature, including items like rocks, shells, leaves and insects. Libraries are strongly interested in offering more active programming related to STEM. The Collector's Corner offers a unique opportunity to engage young library patrons in hands-on natural sciences exploration within the accessible learning environment of a community library. These efforts are then supported by the collections and expert staff from a local museum. Libraries and science museums can create enhanced science learning by working collaboratively to support STEM learning in and out of school contexts. If successful, the Collector's Corner—Natural History Trading Post can be scaled up across the state of Minnesota to reach an enthusiastic youth and family audience looking for ways to enrich standard in-classroom science learning. This model has national potential to encourage greater museum and library partnerships to support greater science literacy by the public.

Q3: You stated in your testimony that incorporating relevant information into your museum causes people to attend. How do you decide what is relevant and what is not and to whom?

We recognize that science is the literacy of the future not just for the audiences we currently serve, but also for those we aspire to serve.

Therefore, it is imperative that places of informal learning build sustained relationships with a broader, more diverse array of local, regional and national communities. We do this in three ways:

• By broadening who informs our work by increasing and the number and variety of new partnerships formed, as well as the length and depth of those partnerships
• By broadening who forms our work through increased diversity of project advisors and leaders
• By broadening those who benefit from our work through an increased range and diversity of our audiences

For example, Brighter Futures: Public deliberation about the science of early childhood development is a project that explores recent research on brain formation and competence development in the earliest years of life as a framework for closing the gap between what we know and what we do to support the well-being of children from birth to age five. The project includes policy forums, community workshops, training for Headstart educators and a 1,600 square-foot exhibition. Brighter Futures is informed by collaborations with Headstart, university researchers, policymakers and parents from communities across the region. The project's programs and exhibits have multiple iterations, allowing a broader community of advisors to form our work so that it is responsive to a broader array of stakeholders. The project benefits not only parents, but all citizens who concern themselves with our society's future. This happens through a carefully designed series of public forums that bring policymakers, scientists and other citizens together to hold informed conversation around supporting the development of our youngest citizens. Brighter Futures is in-

strumental in closing the gap between policymakers and scientists, building on a foundation of the best science to allow museum visitors to become informed citizens.

We are also attentive to external forces shaping the science debates of our day:

• the increasing diversity and needs of our communities (including communities that are now un-served or underserved.)

• the changing content and process of science itself and dealing in real time with these changes.

• challenges resulting from rapid economic and cultural globalization.

• concerns that the U.S. is losing its edge in developing the next generation of workers going into the fields of science, technology, engineering and math.

At the Science Museum of Minnesota, we are intentional in our response to these external forces and how those forces are relevant to each audience we serve. We are deliberate in our internal structure—with an in-house research and evaluation department as well as staff dedicated to community relations, external relations and government—to ensure that we consistently remain relevant to the various audiences we serve, from adults and families, to schoolchildren, teachers and policymakers.

We are a place for adult learners and families

The museum has a long-standing commitment to supporting the learning needs of families. In addition to extensive efforts to design exhibits that support family learning, the Science Museum of Minnesota has been offering family workshops for over 20 years. Most recently, the museum has begun to systematically study new models for engaging families in intergenerational learning that emphasizes science-learning conversations. The museum has also studied the expectations and needs of non-dominant communities in the region. Our research with these communities has provided the foundation for our collaborations with a spectrum of regional family service organizations.

We are a place for schoolchildren

The Science Museum of Minnesota is one of the top school field trip destinations in Minnesota, offering teachers and students out-of-classroom, self-guided, hands-on experiences in STEM. The Science Museum of Minnesota has increased its structured offerings for school groups in recent years, to better align with state and national standards, while meeting the specific needs of students from non-dominant communities is the state. One example is MathPacks, funded by the Medtronic Foundation. Teams of students use mathematical tools to measure, record, compute and analyze data they collect from museum exhibits and objects as they solve a science challenge. The challenges relate directly to current scientific research performed by local scientists and guide the student teams through a series of activities in the museum's permanent exhibit galleries.

We are a place for teachers

Science House was created to provide a vibrant, professional home for teachers at the Science Museum of Minnesota. The resource center provides curricular materials loans, formal and informal consultation, professional development program support, and community-building. One of the museum's most innovate and far reaching programs for teachers at Science House and beyond is the Materials and Understanding for STEM Education (MUSE) in Minnesota initiative, an incubator to mobilize and support professional development partnerships throughout the state. Across the two years of this initiative, approximately 4,000 teachers will receive a total of approximately 18,000 hours of professional development; approximately 16,000 students will receive direct outreach programming; and approximately 150,000 students will engage with exemplary, hands-on curricular materials in STEM using materials on loan from Science House.

The museum's extensive efforts to support schoolchildren and teachers lay a foundation for a long-term initiative that will ultimately contribute to increasing the STEM workforce in Minnesota and sustaining public awareness of STEM as an essential literacy for civic engagement.

We are a place for policymakers

SMM partners with SciMathMn, a non profit statewide education and business coalition advocating for standards-based STEM education improvement, to provide annual legislative policy briefings at the museum for Minnesota state legislators, education leaders and state and local policymakers. These briefings focus on significant emerging STEM education reform issues and challenges that have legislative importance and policy implications.

Additionally, the St. Croix Watershed Research Station (SCWRS) is the field research station of The Science Museum of Minnesota. Founded in 1989, the research

program of the SCWRS has two major facets: in-house research by staff scientists and independent investigations by visiting scientists. Staff research at the SCWRS focuses on scientifically and environmentally important questions on regional, national, and global scales, often with an eye to informing public policy. The research program emphasizes aquatic-based studies involving land-water interaction, biogeochemistry, hydrology, restoration ecology, and aquatic biology. Relevant issues include eutrophication, toxic pollutants, climate change, erosion and sedimentation, and biodiversity.

U.S. CONGRESS,
Washington, DC, September 17, 2008.

MS. ANNABELLE NUNEZ, M.A., *Information Services Librarian, Arizona Health Sciences Library, Tucson, AZ.*

DEAR MS. NUNEZ: Thank you for testifying at the September 11, 2008 hearing of the Committee on Education and Labor on "Examining the Role of Museums and Libraries in Strengthening Communities."

Representative Carolyn McCarthy (D-NY), chairwoman of the Healthy Families and Communities Subcommittee has asked that you respond in writing to the following questions:

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

2. In your written testimony you state that the role of librarians as changed and that today they see their role as connecting individuals and communities with information—printed and electronic—to improve and enhance people's lives. Yet today many people still see the librarian as the person who maintains silence and order in a library. How do we work to help young people see librarian science as a vital career to the life of communities, people, and our nation, and one they should aspire to study?

3. Does the Knowledge River program face any challenges in recruiting Latino and Native American participants—either graduate students or high school students? If so, were those challenges overcome and how?

4. Do you know if the University of Arizona will continue this program after the IMLS grants ends? Is there any plan to expand the number of underrepresented populations recruited to the program?

Please send an electronic version of your written response to the questions to the Committee staff by close of business on Tuesday, September 23, 2008—the date on which the hearing record will close. If you have any questions, please do not hesitate to contact the Committee.

Sincerely,

GEORGE MILLER,
Chairman.

Ms. Nunez's Answers to Questions Submitted

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

A mechanism can be created for greater access to resources used by libraries i.e. databases, books etc., by the schools. Collaborative programming and projects between schools and libraries can be developed and implemented. There is evidence that high-quality professional development enhances student learning. (Kahle, Meece, & Scantlebury, 2000) Librarians can provide training workshops for teachers to use and access library databases. Research is now in progress at the School of Information Resources and Library Science, conducted by a team headed by Dr. Patricia Montiel Overall, that investigates collaboration between teachers and librarian in science and math information literacy, and how the level of collaboration affects student achievement, especially among Latino communities. This research is coming to fruition and should be published soon.

2. In your written testimony you state that the role of librarians as changed and that today they see their role as connecting individuals and communities with infor-

mation—printed and electronic—to improve and enhance people's lives. Yet today many people still see the librarian as the person who maintains silence and order in a library. How do we work to help young people see librarian science as a vital career to the life of communities, people, and our nation, and one they should aspire to study?

Experience is the best teacher. The more librarians and library school students work with young people, the more they will see the potential of libraries as a gateway to fun and information and library science as a career for them. This is exactly what happened in our WE Search program.

More outreach by librarians to all communities, but especially the young is needed. Libraries need to have the ability and resources to expand their services to include integrative, creative programming. Librarians could be active participants in community-based activities to serve as a resource for information. Library work models might let librarians go to the clients and constituencies to be a part of community program planning.

Continued support for programs like WE Search at the University of Arizona, and the Library Leadership Development Institute in El Paso Texas exposes and engages young people to library and information careers in unique and appealing ways.

3. Does the Knowledge River program face any challenges in recruiting Latino and Native American participants—either graduate students or high school students? If so, were those challenges overcome and how?

There are two major challenges in recruiting and one in retention. Numerous reports have show that financial support makes the difference in recruiting Latino and Native American participants. In the case of students newly graduated from college, they often have student debt, and therefore either need to get a job or find support for graduate school. In the case of older students who come back to school, they have families; they need to move to Tucson, and getting a library degree would be unthinkable without financial support.

The second challenger starts earlier, and that is earning a bachelor's degree. The challenge still exists to raise the number of Latinos and Native Americans in undergraduate school. Programs like WE Search that work with high school students not only introduce the idea of being a librarian but reinforce the importance of finishing college.

Whether in graduate school or undergraduate programs, the retention problem is always present. Native Americans and Latinos may not feel comfortable in a primarily Anglo environment. The cohort approach gives them community, and the SIRLS program offers opportunities to go beyond their cohort and interact with all students. Both cohort support and integration are necessary.

4. Do you know if the University of Arizona will continue this program after the IMLS grants ends? Is there any plan to expand the number of underrepresented populations recruited to the program?

Presently the foundational Knowledge River program is self-sustaining at 12 students, using library partners and funds from SIRLS. The new IMLS 2008 grant we just received increases the numbers of KR students to 16, funds professional development activities, and provides funds for community outreach and WE Search.

The subject of reaching other under-represented populations is under discussion, in terms of a different program, parallel to Knowledge River, probably online to reach people who cannot relocate to Tucson. Knowledge River is working so well for the two cultural communities rather than change it, we are considering creating an online program for all under-represented communities. This idea is only in the initial stages.

REFERENCES

Kahle, J. B., Meece, J., & Scantlebury, K. (2000). Urban african-american middle school science students: Does standards-based teaching make a difference? Journal of Research in Science Teaching, 37(9), 1019-1041.

U.S. CONGRESS,
Washington, DC, September 17, 2008.

DR. ANNE-IMELDA M. RADICE, PH.D., *Director,*
Institute of Museum and Library Services, Washington, DC.

DEAR DR. RADICE: Thank you for testifying at the September 11, 2008 hearing of the Committee on Education and Labor on "Examining the Role of Museums and Libraries in Strengthening Communities."

Representative Carolyn McCarthy (D-NY), chairwoman of the Healthy Families and Communities Subcommittee has asked that you respond in writing to the following questions:

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

2. Since more and more people Google rather than go to a library or museum to research a subject, have any studies been completed on the affect of the Internet, with its vast amount of information at your fingertips, on the usage of libraries and museums? Have any recommendations been made or changes implemented in libraries and museums to you r knowledge to address the growing dependence of society on the Internet as a source of information?

Please send an electronic version of your written response to the questions to the Committee staff by close of business on Tuesday, September 23, 2008—the date on which the hearing record will close. If you have any questions, please do not hesitate to contact the Committee.

Sincerely,

GEORGE MILLER,
Chairman.

Ms. Radice's Answers to Questions Submitted

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

Working with museums and libraries to enhance learning has always been an important strategic goal of the Institute of Museum and Library Services (IMLS). I am attaching several publications we have produced on the topic of museums and libraries and K-12 education.

Museums and libraries have important roles to play in supporting science and math learning both inside and outside the classroom. They bring unique assets to youth development, including dedicated, knowledgeable staff; authentic objects, artifacts, and information resources; opportunities for personalized, hands-on learning; support for cognitive and social development; and experiences to help parents, families, and caregivers make learning fun and rewarding. We know that quality library and museum experiences can support student achievement.

Studies from around the world have shown that science and technology museums, zoos, aquaria, and science centers provide memorable learning experiences which can have a lasting impact on attitudes and behavior. In 2006, Ecsite-uk, the "UK Network of Science Centres and Museums," published a review of worldwide studies on the impact of these institutions, collectively referred to as science centers. Researchers found that visits to these institutions provide memorable learning experiences and increase visitors' knowledge and understanding of science.

IMLS has a long history of supporting projects that promote collaboration among libraries, museums and schools. The following are some recent examples:

- With a 2008 grant of $147,000, the Detroit Science Center in Michigan will expand school community outreach activities, including teacher professional development, Traveling Science outreach programs to schools and other community-based organizations, curriculum and science activity kits for science classrooms, and after-school science clubs and increased sponsorship of field trips for schools and organizations that serve minority and disadvantaged youth. A collaborative network among the Detroit Science Center, the Detroit Public Schools Office of Science Education, the Detroit Area Pre-College Engineering Program, Communities in Schools of Detroit, and the Youth Development Commission will help identify and take advantage of opportunities to expand the reach of the center into schools and the community to improve science education in metropolitan Detroit.
- A 2007 grant of $149,971 supports a project that builds on existing partnerships between Gateway to Science and the Bismarck Public School District, along with the Bismarck Parks & Recreation District, Dickinson State University, and the University of Mary in North Dakota, to present hands-on science, technology, engineering, and math (STEM) activities for elementary school students enrolled in Out-of-School Time (OST) programs. Gateway to Science will work with pre-service teachers at Dickinson State University and the University of Mary to present weekly hands-on

STEM activities at established OST programs. The project will provide STEM-focused activities for the students at six different schools.

• The Catawba Science Center (CSC), Hickory, North Carolina used a 2006 grant of $74,938 to develop the Inventor's Lab, one of the first elements of its Touch the Future capital expansion. The 1,300-square-foot lab will support several experiential modes: structured group visits, facilitated activities, unstructured casual visits, and science demonstrations and shows. It will provide the context for open-ended, inquiry-driven science activities and demonstrations facilitated by middle and high school science students from CSC's innovative STEP program, whose participants represent the racial and economic diversity of the greater Hickory community. Lab activities will extend beyond CSC's walls as outreach presentations in underserved areas of Hickory and Catawba County. A primary goal is to use the lab as the context for engaging an increasingly diverse audience.

School libraries are also essential partners in the education of children. IMLS worked with Laura Bush and the Office of the First Lady to convene and publish the proceedings from the first ever White House Conference on School Libraries, a landmark event that brought together leaders from the fields of education, library services, government, and philanthropy to highlight the importance of school libraries in children's education. At this conference, attendees heard from government and foundation leaders, researchers, and librarians about a variety of studies that demonstrated the power of the library in students' learning. The distinguished speakers agreed that libraries—in classrooms, schools, and communities—are vital for children's achievement, and developing informational needs. Repeated studies document the positive impact of a quality school library and trained library media specialist on student achievement.

The dialogue on the reauthorization of NCLB would be enriched by involving leaders of the science and technology center community and other museum and library experts to:

• Build upon our current knowledge and accomplishments in school, museum and library collaborations that put the needs of learners' first;

• Make recommendations to remove barriers to encourage schools to make optimal use of community learning resources;

• Stimulate innovation;

• Increase the use of digitized resources in the classroom;

• Prioritize research to identify best practices and disseminate model demonstration projects.

2. Since more and more people Google rather than go to a library or museum to research a subject, have any studies been completed on the affect of the Internet, with its vast amount of information at your fingertips, on the usage of libraries and museums? Have any recommendations been made or changes implemented in libraries and museums to your knowledge to address the growing dependence of society on the Internet as a source of information?

While the use of Google and other Internet tools is certainly widespread and growing, our research disputes the contention that people are using these tools rather than libraries and museums. I am attaching the conclusions overview of InterConnections: The IMLS National Study on the Use of Libraries, Museums and the Internet, the results of which I released in March at the Institute's annual WebWise Conference on Libraries and Museums in the Digital World. This groundbreaking study found that contrary to the notion that the Internet is replacing libraries and museums, it actually increases the use of these long-trusted institutions.

The following are some of the findings and conclusions of InterConnections:

• Libraries and museums are trusted far more than other sources of information including government, commercial, and private Web sites.

• The vast majority of visitors to museums (95%) and public libraries (96%) continue to visit in person, an indication that the Internet is not replacing in-person visits.

• The number of remote online visits is positively correlated with the number of in-person visits to museums and public libraries.

• Internet users are more likely than non-users to visit museums and public libraries and to visit them more frequently.

• To fulfill their need for information, most adults use museums, public libraries, and the Internet. Museums and public libraries are used by 70%, the Internet is used by 83%, and nearly half use all three.

• The public benefits significantly from the presence of museums and libraries on the Internet.

IMLS also funded a survey conducted by the Pew Internet & American Life Project and the University of Illinois, examining what sources people consult when they need information to solve common problems, such as those concerning health

care, education, taxes, and job searches. The survey, Information Searches That Solve Problems: How People Use the Internet, Government Agencies, and Libraries When They Need Help, found that 53% of American adults had visited a public library in the previous 12 months. In what appears to be a direct refutation of the belief that library usage is dropping, the survey found that younger adults are the most likely to visit the library (62% of those 18-30 and 59% of those 31-42). And, like the Interconnections study, the Pew/UI survey found that Internet users are more likely to use libraries than non-users: 61% of those who use the Internet reported going to libraries in the past year, compared with only 28% of those who do not use the Internet.

The survey confirmed that "more people turn to the internet (at home, work, libraries, or other places) than any other source of information and support, including experts and family members." This is not surprising since accessing the Internet takes so little effort for most people. But the survey also found that personal assistance from a librarian has the potential to greatly increase an information seeker's level of satisfaction: "Nearly four in five (79%) say they were very satisfied with the assistance they received from the library staff, and 19% say there were satisfied. Only 1% said they were unsatisfied." Among those who received personal help at the library, 88% said they found "a lot" or "some" of what they were seeking. That this extraordinary level of satisfaction does not translate into more people using libraries to help solve problems suggests, as the Pew/UI survey says, "that a key challenge for librarians is to make sure that those who consider the library as a potential problem-solving resource actually recognize they can use the library."

We also know that libraries give users the ability to find information more specifically suited to their needs. Digitization technologies and the statewide licensing of databases—a common use of IMLS Grants to States funding—provide a much more specialized pool of information than can a mammoth search engine such as Google.

Based on our findings and experiences, we recommend that museums and libraries continue embracing the Internet as they have been, and that they continue their community outreach efforts to ensure that people are aware of the tremendous resources they provide.

U.S. CONGRESS,
Washington, DC, September 17, 2008.

MS. MARY CLARE ZALES, *Deputy Secretary of Education for Commonwealth Libraries, and Commissioner for Libraries,*
Office of Commonwealth Libraries, Harrisburg, PA.

DEAR MS. ZALES: Thank you for testifying at the September 11, 2008 hearing of the Committee on Education and Labor on "Examining the Role of Museums and Libraries in Strengthening Communities."

Representative Carolyn McCarthy (D-NY), chairwoman of the Healthy Families and Communities Subcommittee has asked that you respond in writing to the following questions:

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

2. In your written testimony you highlight two regional libraries for the Blind and physically handicapped. Can you describe in more depth the kind of services offered?

3. Can you describe what growing needs that rural libraries have based on your experience in Pennsylvania, if those needs are being met, and if so, how?

Please send an electronic version of your written response to the questions to the Committee staff by close of business on Tuesday, September 23, 2008—the date on which the hearing record will close. If you have any questions, please do not hesitate to contact the Committee.

Sincerely,

GEORGE MILLER,
Chairman.

Ms. Zales' Answers to Questions Submitted

DEAR CHAIRMAN MILLER: Please find attached responses to the questions submitted by Committee members in regards to the hearing for which I testified on September 11, 2008.

I appreciate the opportunity to respond to inquiries on the important topic of examining the role of libraries in strengthening communities. In addition to my responses to the follow-up questions, I wish to mention further the important role that libraries play for teens today. Libraries have seen dramatic increases in teen summer reading program attendance and many libraries have teen centers and collections. Libraries provide a safety net with after-school programs and evening hours that give young teens a safe place to be and activities to engage them and keep them off the streets. Across our state and across the nation libraries have become a cool place for teens to be.

If I may be of any further assistance to the Committee, please do not hesitate to contact me.

Sincerely,

M. CLARE ZALES
Deputy Secretary for Libraries.

1. Please describe how museums and libraries can work together with Congress, schools, and other stakeholders to improve math and science education both inside and outside the classroom in the context of the reauthorization of the Elementary and Secondary Education Act of 1965, better known as NCLB? If you have thoughts outside NCLB those are also welcome.

When it comes to our children's education, we must ensure that they receive the best instruction possible from competent, qualified instructors. This is true in the classroom and should be true in our school libraries. The over 62,000 state certified library media specialists in public schools and 3,909 state certified library media specialists in private schools in the United States fill multiple roles—teacher, instructional partner, information specialist, and program administrator—ensuring that students and staff are effective users of information and ideas.

Multiple studies have affirmed that there is a clear link between school library media programs that are staffed by an experienced school library media specialist and student academic achievement. The research studies show that school libraries can have a positive impact on student achievement—whether such achievement is measured in terms of reading scores, literacy, or learning more generally. Unfortunately, about 25 percent of America's school libraries do not have a state-certified librarian on staff.

In Pennsylvania, school, public and academic libraries provide students with authoritative databases in the sciences that are available statewide. The books and other materials of these libraries are also available in a statewide online catalog that enables students to find and borrow items statewide to support research in the sciences. These library programs also benefit dual enrollment students who are taking college level courses while still in high school. With the assistance of trained library staff, students are able to obtain the information they need to perform better in the classroom. These same resources also provide professional literature in math and science education for teachers to assist them in the performance of their jobs.

2. In your written testimony you highlight two regional libraries for the Blind and physically handicapped. Can you describe in more depth the kind of services offered?

The Libraries for the Blind and Physically Handicapped in Pittsburgh and Philadelphia are part of the National Library Service—a nationwide program serving persons with disabilities. Among the many types of services offered by these libraries are books and magazines on audiocassettes, in large print and in Braille, as well as descriptive videos and assistive technology that can magnify print, enlarge computer screens, convert print and computer screens into synthesized speech, and create Braille documents using computer software.

I would like to share with you two stories from our Regional Libraries that illustrate the use of these services:

• A grandmother who uses talking books asked her Regional Library how she might share books and puzzles with her sighted granddaughter who lives in another state. The library recommended that she subscribe to the large-print junior quarterly newsletter for its young readers. She cuts out the articles and games from the newsletter and sends them to her granddaughter. Her granddaughter's teacher wanted to know how she knew so much about different books, library topics and literary jokes. Her granddaughter replied, "Nana's special library!"

• An elderly gentleman who has a physical disability and is in constant pain visits his Regional Library periodically to use the computers with screen magnification. He recently read an article about the library aimed at senior citizens. "I had no idea of the magnitude of what you do here! What wonderful service. And for a staff who has so much responsibility to maintain such kindness and efficiency is amazing."

Pennsylvania is participating with other states to prepare for the transition from the current books on audiocassette program to the new National Library Service

Digital Talking Book project by 2010. This will provide a great advancement in ease of use and efficiency, but it comes with an expense which in Pennsylvania in being borne by a combination of state and federal Library Service and Technology Act funds.

The Libraries for the Blind and Physically Handicapped provide services to individuals who have no other recourse for the information they need for school, work and daily living. Providing this service on a state and national level offers great efficiencies and technological advancements that could not be achieved on the local level. Local libraries and other service providers are able to offer this service to eligible residents who then are able to take advantage of this wonderful and essential program.

3. Can you describe what growing needs that rural libraries have based on your experience in Pennsylvania, if those needs are being met, and if so, how?

Libraries play an especially important role in rural areas, where geography can affect people's ability to obtain the information they need. This is particularly true in the area of telecommunications. Pennsylvania has a large number of rural communities where high-speed Internet connections are either not available or, when available, are inadequate for keeping up with today's demands for information at work, school and home.

The Study of Internet Connectivity in U.S. Public Libraries released this year by the American Library Association and Florida State University shows that rural libraries have Internet connectivity speeds that were generally slower when compared to libraries overall. States such as Pennsylvania with a high percentage of rural libraries also have a higher percentage of libraries without high-speed connections and without wireless Internet access.

There is a need for Congress to develop a long-range vision for broadband deployment and to recognize that libraries are critical partners during broadband planning and build-out. Libraries are especially important for long term service to households without any or with very slow connectivity, in rural, hard-to-reach, and low-income communities. In Pennsylvania we have been able to use Library Services and Technology Act funds to assist rural libraries in improving computer services within libraries and among libraries to better meet the needs of the public.

In rural areas libraries are often the community center providing children and adults educational and cultural opportunities as well as business and job information. Interlibrary loan is particularly valuable in rural areas due to the greater distance between libraries. More materials are being borrowed from other libraries for library patrons to meet the increased need for information in today's society. In Pennsylvania school, public, academic and special libraries cooperate together in a statewide online catalog of library holdings to make access to libraries easier for our residents. While libraries in our state have made great strides in meeting the needs of rural residents, there is still a need for greater funding for libraries particularly to keep collections up-to-date and adequate.

Facilities are also in great need of expansion and improvement. Construction needs greatly exceed monies available. Library Services and Technology Act funds can help in the areas of increasing services and improving library collections, but they are not a source for library construction. While technology has become an important aspect of rural library service, the basic needs for staff, books, and buildings are still very important in meeting the library needs of our nation's rural citizens.

[Additional statements submitted by Mrs. McCarthy follow:]

Prepared Statement of the American Library Association

The American Library Association is the oldest, largest library association in the world representing over 66,000 libraries, librarians and library supporters.

Around the country, knowledgeable librarians help patrons of diverse geographic, cultural, and socioeconomic backgrounds, individuals with disabilities, and people with limited literacy or skills access essential information on a wide range of topics. In a 2008 survey for IMLS, respondents identified libraries as the most trusted source of information.

They provide training on resume development; job bank web searches; workshops on career information; links to essential educational and community services; assistive devices for people with disabilities; family literacy classes; homework help and mentoring programs, and so much more.

Americans check out an average of seven books a year. A Harris poll in 2008 found that more than one-third of Americans read more than 10 books in an average year. Almost half of all in-person visitors to the library use a library-provided com-

puter. These visitors use the computer for formal education and work-related purposes.

A January 2007 report by the Urban Libraries Council (ULC) concludes:

"Public libraries are logical partners for local economic development initiatives that focus on people and quality of life. Libraries are widely available, highly regarded public institutions that provide a broad range of information services and support for diverse constituencies * * * Their open structure, combined with the power of new digital collections, technology, and training, position them to help communities make the transition from manufacturing and service economies to high tech and information economies."

Business

For many small businesses the library provides research resources and staff they could not otherwise afford.

The Topeka & Shawnee County Public Library Business Librarian, Terry Miller, works in conjunction with the Small Business Development Center to provide classes for business startups, and give instruction on their many business resources. The Executive Director also works on the board of the Topeka Visioning Project; to determine which direction the city should go in terms of economic development, community development, and quality of life issues.

The Lebanon Public Library in Lebanon, Indiana has a separate business collection and provides extra reference services for patrons interested in starting, growing, and maintaining businesses. They partner with the Boone County Learning Network to offer business basics classes, and with the Boone County Chamber of Commerce to reach out to and support new and established businesses that might otherwise be unaware of the resources a small-town public library offers. The Library also maintains a "Business File" which allows any locally owned company to deposit publicity and marketing materials for distribution to interested patrons. Finally, the Library offers space for businesses and hiring agencies to hold job fairs and interviews.

The Mead Public Library in Sheboygan, Wisconsin began a partnership with SCORE in 2008, in order to provide information to small business owners. A program was held in May, focusing on marketing and sales, human resource development, and cash and expense control. It also included a description of all types of aid offered by SCORE, and a tour of the library, so that attendees would gain an understanding of the ways in which library collections and technology could help them. The four presenters, all SCORE volunteers, had a combined total of over 100 years of business experience and knowledge to pass on.

In the fall of 2008, SCORE will again be presenting a program at the library aimed at small business owners. It will focus on developing and writing business plans, including: executive summaries, mission statements, company structures, products/services, target customers, marketing analysis, market potential, getting to market, identifying competition, promoting products/services, differentiation, pricing, and financial modeling.

The Skokie Public Library has an extensive and well-established Employment Resource Center for Adults. The information is also available on the Library's Web site. There is a Skokie Career Support Group that meets monthly at the Library with a licensed career counselor. The Library maintains a list of major employers in Skokie and posts open positions on a Board in the Employment Resource Center. Skokie librarians maintain a web site with information about metropolitan area employment resources. They also offer programs every month such as this month programs on "Death to Boring Resumes" and "Going into Your Own Business". These programs bring in outside experts to talk with library patrons.

The Village Library of Morgantown is a small public library in rural Pennsylvania that is building a new Small Business Collection for local business owners. Included in this new section of the library will be several print resources on starting and growing a business, a set of online databases for business owners to reference either in the library or at home and a new state-of-the-art computer with the most up to date software. This collection is the start of their business services, to be followed by programs such as workshops from the local SCORE group and breakfast talks from the business librarian of a larger library located several miles away. The funding for this project was provided by an LSTA grant.

Grand Rapids Public Library in Michigan opened a Small Business Resource Center with workstations, print and online resources to help small business owners find the current market research and startup information help they need to succeed, including industry, competitor and customer information. We guide the research paths of both starting and current business owners and often refer them to other area organizations that provide free business counseling and classes.

The local SBA representative does two programs per year at each of Gloucester County Library System's branches. Called "Financial and Technical Assistance for Small Business", he explains the many free training programs and financing options available to anyone thinking of starting a business or expanding an existing business. This same SBA representative conducts an occasional SBA day in the library where individuals can make an appointment with him and ask any business questions they like.

One of the most popular services at the Scarborough Library is their annual Small Business Week. They set up a display representing 30-35 members of the small business community. This provides visibility to the many businesses that do not have a storefront or obvious public presence but represent the majority of the more than 1000 small businesses. During this week they also have educational seminars for the business community. This year's theme was "Going Green" and it highlighted the environmental initiatives within each participating business from recycled office supplies and packaging to programmed thermostats and new lighting. The seminars featured speakers from the Maine Public Utilities Commission and the local regional waste business-recycling program.

Early Childhood

The children's program called "Booking With a Buddy" benefits early readers, generally children who have just completed first or second grade, and need practice in reading over the summer. In Skokie, the program is particularly helpful to families speaking a language other than English at home because there may not be anyone who can read in English with the child. This summer, 57 young children were paired with 49 older kids of junior high or high school age who volunteered to meet with the young children at least once a week for reading sessions at the Library. Of course, the older kids benefit from the experience also, but the Library holds a pizza party to thank them at the end of the summer.

In 2007, the Durham County Library joined with the Durham Public Schools and MetaMetrics to intensify the library's efforts to counter the "summer slide" phenomenon. The project encourages Durham's students to continue reading throughout the summer months, by helping students and their parents use their Lexile scores to choose the best books they are interested in reading. When the End-of-Grade report is sent home, a special letter accompanies it from the School Superintendent encouraging students to participate in the library's summer reading club. Although the schools have always sent home the Lexile scores most parents did not understand how to use them or did not pay close attention to them. The parents' primary concern was whether or not children were being promoted to the next grade.

The Durham County Library Bookmobile provides individualized library service to a diverse population throughout the County that otherwise does not have access to library services. The bookmobile is on the road six days a week covering over 200 miles each week, visiting over 80 locations each month, driving on highways and back country roads. Although the Bookmobile serves all sectors of the Durham population, the focus is on three major groups: preschools and daycares, Durham public housing neighborhoods, and outlying neighborhoods and shopping centers not located near a branch library.

Young Adults

In a 2007 Harris poll, more than three-quarters of youth 8-18 said that they have a library card. More than 80% said that they have been to their school or public library in the past year, and 18% said that they had been more than 20 times.

Skokie Public Library sponsors a teen job fair each spring, together with the Skokie Park District. Agencies and businesses such as fast food restaurants that hire teens have representatives at tables at the fair. Teens can find out about job possibilities and sign up for interviews. The Library also conducts mock interviews and prepares tips on how to be successful in your first job.

The Santa Clara County Library created "Get Tech @ the Library", a program to address the user-based need for increasing the interest, confidence, and creative thinking in science and technology of youth in grades 7 and 8 with a special emphasis on Hispanic and female youth.

Immigrant Outreach (ESOL & Computer Classes)

Durham County Library has a full-time Hispanic Services Coordinator who goes out into the community to get library services to Latino community members. The library also offers English for Speakers of Other Languages classes at many of its facilities.

The San Diego County Library offers Gateway Internet classes to residents of the County that are Chaldean, Iraqi, Kurdish, or Arab and need computer instruction and training on how to access and use the Internet and the library resources at the

Library. The need was determined by a community needs assessment, interviews with community leaders that are stakeholders and input from staff.

Free Access to Computers and Basic Computer Classes

More and more computer access is necessary to apply for jobs and to gain critical information. 73% of U.S. public libraries reported in 2008 survey that they are the only source of free public access to computers and the Internet in their communities. Libraries are working to close the "digital divide" in many of our nation's distressed communities; 99% of public libraries offer no fee, public access to computers to the Internet. 73% offer information technology training for their patrons.

But 83% of all public libraries reported in 2008 that there are fewer public Internet computers than patrons who wish to use them some or all of the time, up 5% from last year. And, 58% of libraries report that their current Internet connection speed is insufficient.

The Durham County Library offers basic computer courses for free. Community members can take Intro to Computers, Word, Excel, Email and Internet courses. By offering these courses, the library helps to bridge the technology divide and ensure access to the entire community.

Queens Library offers the community's only free workshops on basic computer skills in Spanish, helping new Americans prepare for better jobs. Computer skills workshops in English are filled to capacity.

Military Base Libraries

Military librarians are addressing the changing needs of all service members and their families by adding new resources to the military online library located at www.militaryonesource.com. This has been a joint collaboration of all branches of the military in an effort to increase the online library offerings to all service members and their families. The lead librarians of each service have worked hard to ensure that quality materials will be made available online seven days a week, twenty-four hours a day to people of all ages located around the world.

This new offering on Military OneSource is a more convenient way for service members and their families to access materials, and also saves the different branches from purchasing the same materials separately. These new resources will be especially helpful to those National Guard and Reserve service members and families that do not have regular access to a general military library.

It is a combination of recreation and self-help material that comes in different formats, including audio, interactive, and text. Especially useful are books on "Playaway" format, individual audio books that can be passed around among the soldiers over seas and come equipped with a battery, lanyard and the earphones.

The Andrews Air Force Base library has a large collection of study materials for military personnel and their families who are continuing their education. The base librarians are also available to proctor exams as needed. Youth on the base gather at the library as they participate in a youth chess club.

The Marine Corps' Gray Research Center Base Library has a wonderful interactive children's area where the library holds story time and craft sessions. This area is often full of young families enjoying the activities sponsored by the library. There is also a computer and study space for the adults that are separate from the children's area, allowing the adults to focus on their reading.

E-Government Services

As government agencies continue to digitize forms and services, public libraries—as centers for public access computing in their communities—are often the only organizations that can help citizens interact with their government and access E-government services. 74% of libraries report that their staff provides as-needed assistance to patrons for understanding and using e-government resources.

This user assistance can range from teaching how to use the Internet to search for E-government information and forms, to locating and using various benefit programs whose applications are only available online, to completing job applications. Some of the most noteworthy E-government initiatives launched in recent years include electronically filing taxes, making appointments for immigration interviews, and applying for the Medicare Prescription Drug Card, for which librarians have become unintended experts.

Low-income families, and particularly the elderly, often do not have Internet access at home or do not know how to use it. Even families that do have Internet access continue to go to the library, because their connectivity or software is not sufficient for accessing programs, and/or they want the knowledge, guidance, and personal assistance of a trusted librarian.

The Cobb County Public Library System's Stratton Branch has a firm belief that each patron's need deserves a more then adequate response. Cobb County librarians

do not only locate government information for their patrons online, but they will also help the patron as much as possible in completing their work. This can entail acquiring an email address for the patron and navigating through applications such as FAFSA and Medicare Part D. This one reference transaction can take well over an hour of the librarian's time.

The Skokie Public Library sponsors a public forum for a representative from the local Congresswoman's office two evenings per month at the library. People may come without appointments to ask questions about any federal services such as Veterans' benefits, Social Security, immigration issues, Medicare, etc. Recently, a second representative who speaks Spanish has begun to come to the library to help Spanish-speaking residents. The evening hours and neutral image of the library contribute to the success of this program.

Life Long Learning

The Queens Library (New York) offers free programs that give the community needed practical tools to enrich their lives. To address the current state-of-affairs in the mortgage and credit sectors, the library has been offering workshops on the Money Mistakes of First-time Homebuyers, along with classes in financial literacy, in English and in several major immigrant languages.

Seniors

The Topeka Public Library has a program to serve the older population, the "Red Carpet Service" a dedicated bookmobile that visits nursing homes, congregate living centers, and meal sites. They also have volunteers that make home visits with staff for individualized service. This service includes providing low vision magnifiers and other devices for people with disabilities to try for three weeks, so that the patron can test them in their own home. Then the librarian assists with ordering information to obtain the device.

Durham County Library's OASIS (Older Adult and Shut-In Service) offers services to individuals unable to visit the library due to age, illness, or physical disability. OASIS provides reading material and programs to homebound people in nursing and rest homes, retirement communities, senior centers, and private residences. Prisons and other institutions are also served through OASIS.

School Libraries

When it comes to our children's education, we must ensure that they receive the best instruction possible from competent, qualified instructors. This is true in the classroom and should be true in our school libraries. Education is not exclusive to the classroom; it extends into school libraries and so should the qualification we demand of our school librarians. Students visit school library media centers 1.5 billion times a year.

School library media specialists are, in every level of education, the professionals who give students the skills they need for jobs in the 21st century workplace: computing, networking, and learning how to locate and utilize all the information available to them. The over 62,000 state certified library media specialists in public schools and 3,909 state certified library media specialists in private schools in the United States fill multiple roles—teacher, instructional partner, information specialist, and program administrator—ensuring that students and staff are effective users of information and ideas.

Multiple studies have affirmed that there is a clear link between school library media programs that are staffed by an experienced school library media specialist and student academic achievement. The research studies show that school libraries can have a positive impact on student achievement—whether such achievement is measured in terms of reading scores, literacy, or learning more generally.

School libraries are critical partners in ensuring that states and school districts alike meet the reading requirements that are part of the No Child Left Behind Act (NCLB), as well as Congresses unequivocal commitment to ensuring that every child can read by the end of third grade.

Our Nation's school libraries are facing a crisis. With limited funding and an increased focus on school performance, administrators are trying to stretch dollars and cut funds across various programs to ensure that maximum resources are dedicated to improving student academic achievement. Only about 60 percent of our school libraries have a full-time, state-certified school library media specialist on staff.

Because NCLB does not highlight the direct correlation between school library media specialists and increased student academic achievement, library resource budgets are increasingly being used to mitigate the effects of budgetary constraints. When you reauthorize NCLB, you can address this oversight by highlighting the important role school library media specialists play in academic achievement and require school districts, to the extent feasible, to ensure that every school within the

district employs at least one state-certified library media specialist in each school library.

Prepared Statement of Ford W. Bell, DVM, President, American Association of Museums

Chairwoman McCarthy, Ranking Member Platts, and Members of the Subcommittee, thank you for holding this hearing today on how museums and libraries help to strengthen communities. Given the many important issues facing our nation, I am grateful to you and to your staff for devoting time today to the crucial work museums do every day to strengthen communities. It is particularly appropriate that this hearing take place on this solemn, sober anniversary—museums are where future generations will likely learn of September 11, 2001 and how the events of that day changed America and the world.

As President of the American Association of Museums, I am keenly aware of the ways in which museums work in the community to offer lifelong learning opportunities, promote civic engagement, celebrate cultural heritage, and much more.

As you may know, the American Association of Museums (AAM) represents the full range of museums—art museums, history museums, science centers, children's museums, zoos and aquariums, public gardens and many specialty museums—along with the professional staff and volunteers who work for and with museums.

Museums are all about connections to the natural world; to the science that explores the workings of the universe; to the documents, artifacts and places that make up our history; and to the greatest achievements of humankind. Museums also connect Americans to the future, fostering innovation and sparking creativity. Indeed, education is the central purpose of museums.

However, unlike schools and libraries, most museums operate as private, nonprofit organizations with nominal government funding. According to AAM's most recent financial survey, nonprofit museums receive approximately 24 percent of their budget from local, state and federal funding. The bulk of their income is derived from private philanthropy in the form of donations, grants and corporate sponsorships and earned income from admissions and gift shop sales.

Promoting Lifelong Learning

A recent national survey indicates that Americans view museums as one of the most important resources for educating our children and as one of the most trustworthy sources of objective information. So it's not surprising that nearly 11,000 museums provide more than 18 million instructional hours for educational programs such as professional development for teachers, guided field trips for students, staff visits to schools, and traveling exhibits in schools.

It is significant to note that most museums offering educational programs in math, science, art, and history use local and state curriculum standards to shape their educational programs.

Museums serve as important community places to gather, learn, experience, imagine, and explore. Similar to a family dinner gathering, museums provide unique opportunities for families to communicate with each other. You will frequently find generations sharing experiences at a museum: a grandfather bonding with his grandchildren by telling stories of early transportation modes; a grandmother describing to her family how a significant news event changed the nation.

Museums are also leading the way in environmental education. The Brooklyn Botanic Garden hosts numerous environmental education programs, including a community composting effort, in cooperation with the New York City Department of Sanitation. The project offers workshops in English and Spanish and provides instruction on composting in neighborhoods, businesses, community gardens and other institutions.

Museums are making a difference in the lives of seniors. Two Philadelphia area World War II veterans in their 80s, Bill McLaughlin and Dick Hughes began visiting museums to help Bill through his wife's battle with Alzheimer's. They saw the Academy of Natural Sciences one week, the battleship New Jersey the next, and continued visiting local Philadelphia museums and historic sites for three years and a total of 203 museums. Museums helped them maintain their independence and mental agility. This is a poignant example of how museums bring us together, and of how these public institutions served two men who had served their country so nobly.

With 2.3 million museum visits per day—600 million visits per year—museums are indeed everywhere. There are more than 17,500 museums in the United States and nine out of 10 counties in America have at least one museum. Forty-three per-

cent are located in rural areas. More than one-third (35%) of museums are free to the public, and of those museums that do charge, 98 percent offer special discounts, and nearly 62 percent have free admission days.

Promoting Cultural Diversity and Understanding

Museums serve as protectors of our artistic, historic, scientific and cultural heritages. Museums care for more than 750 million objects, including original historical documents, cultural artifacts, priceless works of art, and scientific specimens.

At the Alutiiq Museum & Archaeological Repository in Kodiak, Alaska, visitors can explore 7500 years of Alutiiq heritage, including the endangered Alutiiq language. Community programs include an annual archaeological excavation, where community members participate fully in the excavation of a threatened archaeological site.

The United States Holocaust Memorial Museum in Washington, DC serves as a living memorial to the Holocaust, inspiring visitors to confront hatred, prevent genocide, promote human dignity, and strengthen democracy.

The Institute of Museum and Library Services (IMLS) makes a powerful contribution to helping museums reflect our nation's diversity. The Native American/Native Hawaiian Museum Services grants and Museum Grants for African American History and Culture have been instrumental in supporting cultural understanding and exchange, which strengthens our communities by bridging our differences.

In St. Paul, the Minnesota Historical Society has initiated a program to help integrate the Twin Cities' sizeable Somali population into their new host culture. Somali women are often isolated due to religious and cultural strictures. This program trained 15 Somali women in the use of digital technology, resulting in a compelling film, Two Homes, One Dream: The Somalis in Minnesota. For the film the women did historical research; conducted oral history interviews with peers, elders, educators and community leaders; and filmed events across the Twin Cities. Four years after its completion, Two Homes, One Dream is still requested and featured in public screenings throughout the region, as its themes of cultural identity and the immigrant experience continue to resonate.

Promoting Global Competitiveness

At a time when our nation is poised to lose its global competitive edge, museums are inspiring kids to study science.

Pittsburgh's Carnegie Science Center stages a science, math, and technology camp ("Click!") for girls 10-14, at the critical stage when girls frequently lose interest in these fields.

The Oregon Museum of Science and Industry proudly tells the story of an "OMSI kid" who built his first telescope at the museum. Today that kid is Dr. Michael Barratt, medical doctor and NASA astronaut, who will be joining the international space station crew this spring. His connection to OMSI is so strong that he has asked to take an OMSI object on his upcoming space mission.

Serving as Economic Engines

Museums serve as economic engines in many communities, helping to attract and retain businesses and inspiring tourism. When families plan their vacations, a museum is likely to be in the top three destinations.

One-third of Americans say they have visited an art museum, history museum, aquarium, zoo, botanical garden, or science and technology center within the past six months. Almost a quarter has gone within the past year. Trips including cultural and heritage activities comprise one of the most popular and significant segments of the travel industry, accounting for over 23% of all domestic trips.

In many ways, museums are the stitching in our social fabric, serving to bind America's diverse communities into one nation. Moreover, museums are a rarity among public institutions, in that they simultaneously illuminate our past, present and future. Museums also step in to complement stretched social services—a function that is increasingly important today. Similar to the members and staff of this committee, the mission of museums is public service. It is a role we are proud and privileged to fulfill.

[Additional materials submitted by Dr. Jolly follow:]

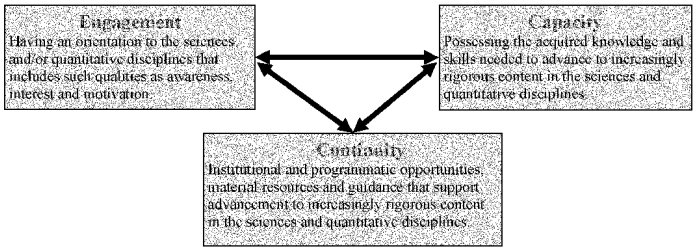
Engagement, Capacity and Continuity: An Overview of A Trilogy for Student Success

Eric J. Jolly, PhD, Science Museum of Minnesota
Patricia B. Campbell, PhD, Campbell-Kibler Associates, Inc.
Lesley Perlman, MA, Campbell-Kibler Associates, Inc.

Taken together, access to science and mathematical literacy are powerful predictors of economic success and gatekeepers for the broadest economic opportunities.

Fewer American students are going into the sciences, engineering and quantitative disciplines in college and beyond (NSF, 2004). Programmatic, instructional and curriculum successes have not led to expected increases in the numbers and diversity of those achieving at high levels and going into careers in the sciences and quantitative disciplines. We are winning some battles but losing the war. The Engagement, Capacity and Continuity Trilogy (ECC Trilogy) explores why our successes are not translating into more progress, and more importantly, proposes what different stakeholders can do about it.

The ECC Trilogy



The underlying assumption of the ECC Trilogy is that all three factors must be present for each student in order to ensure that student's success. Each of these factors is necessary but individually is not sufficient to ensure student continuation in the sciences and quantitative disciplines[1].

Copies of the full report, which was supported by the GE Foundation, can be downloaded from www.smm.org or www.campbell-kibler.com.

[1] There are of course other factors not directly related to education and educational experiences that affect student success. Success is harder for the hungry student, the tired student, the unhappy student. Basic needs, such as fresh air, clean water, nutritious food, adequate sleep and safety, must be addressed in conjunction with educational factors for the trilogy to be successfully applied to most students (Maslow, n.d.).

The factors are interdependent. The absence of one can have an impact on the degree to which the others are present. For example, without knowledge and skills (Capacity) many individuals will not be able to take advantage of available opportunities and resources (Continuity). Correspondingly, Capacity is based at least in part, on earlier Continuity.

Previously Engagement, Capacity and Continuity have been addressed separately when, as the following examples indicate, they need to be considered together.

- If a student has succeeded in content mastery (Capacity) and an educational system supports her or his further advancement (Continuity) but the student has no interest (Engagement), she or he will most likely not continue on in the sciences and/or quantitative disciplines.
- If a student has the Capacity and Engagement but the system does not offer such opportunities as calculus, AP courses, or even information on colleges and financial aid (Continuity), then despite interest and ability the student is not likely to advance into the sciences or quantitative disciplines.
- If courses, information and academic supports (Continuity) are available and a student has a high interest (Engagement) but she or he doesn't have the requisite content mastery (Capacity) to move to the next level, then that student simply will not be able to advance.

If the ECC Trilogy is correct, then as long as social and health needs are being addressed where they exist, programs, reforms and even school districts, that support all three factors should be successful. Efforts that focus on one or two of the three factors for students who already have the remaining factor(s) also should be successful. The ECC Trilogy is based on an assessment of the degree to which each of the factors is present for each student, not on average scores for groups or subgroups of students.

Implications of the ECC Trilogy for Different Populations

Educational Policy Makers

- Educational policy makers can use the ECC Trilogy to help ensure that their policies and grant programs have better chances for success by clearly addressing all three areas of the ECC Trilogy in their efforts. To do this, policy makers can refer to the three factors in their policies.

Sponsors

- Those who fund projects and programs can explicitly address the ECC Trilogy by requiring that any proposed project or program include a needs assessment of targeted populations addressing areas of Engagement, Capacity and Continuity. They also can review funded projects to determine if project partners have the skills and resources to address student needs in ECC Trilogy factors.

Curriculum/Program Developers

- Prior to the design of any program, an assessment, disaggregated by race/ethnicity and sex, should be done of the target population's needs focusing on Engagement, Capacity and Continuity. The results of the assessment should be used to determine program

components. The program should meet target student needs as identified by the assessment, or, if student needs can't be met through programming, by partnerships established to extend the program's capabilities.

Evaluators

- The ECC Trilogy can help to frame evaluation designs and contribute to our understanding of "what works for whom in what context." Having ECC indicators at the individual student level can help explain why some students are positively affected by some projects and others aren't. Regardless of the focus of the program being evaluated, the evaluation should include measures of all three factors and should periodically reassess the program and participants to look for impact as well as to determine if needs have changed.
- Studies designed to look at the effects of promotion and retention polices, standards-based reform programs, summer programs, and teacher reforms and professional development can be strengthened if the three ECC factors are included in the data collection and the results used to help understand why different policies and reforms are or are not working.

District/School Administrators

- The ECC Trilogy has implications for district/school administrators, both programmatically and in terms of accountability. Programmatically they need to ensure that efforts they support address all three areas of the ECC Trilogy; that students participating in their educational system have easy and equal access to the resources that support each factor, and that students utilize those resources. Any accountability system needs to include data from all three factors as well.

Teachers

- Teachers can apply the ECC Trilogy in their classes, assessing where individual students are in the ECC Trilogy and using that information in curriculum and other decision making. They can use the ECC Trilogy to help answer such questions as:

  Which of my students are engaged in what areas?

  Do my students have the skills and knowledge to continue on in the area?

  Do I have the skills and resources, including content knowledge, curriculum materials and teaching skills, needed to move my students up to the next level?

Museums and Other Informal Science Institutions

- Museums and other informal science institutions are often seen as focusing primarily on Engagement. While this can be the case, they also have the potential to support student Continuity and create student Capacity.
- Informal science programs can coordinate programming with others skilled in addressing different ECC factors. For example, a museum can present engaging activities that are intentionally related to a student's school-based core subject and can work with others to bring mentors into the school to increase student Continuity.

In Closing

"If my intentions are good and my heart is pure, then I must be doing the right thing."[2]

The "pure of heart model" often speaks to what motivates and inspires many of us in education reform. We have for decades wanted to do the right thing, to inspire, to teach and to create pathways and opportunities for every child's success. Enough passion, in the right circumstance, can lead to success but too often it does not. The passion that drives educational reform must be matched by a will to assess and cooperatively deliver an environment in which every child, regardless of race/ethnicity or sex, has the Engagement, Capacity and Continuity necessary to succeed.

We've often said to children, "You can be whatever you want, as long as you work hard enough." But children need access and support in order for that to happen. The ECC Trilogy focuses on not just the child's will, but on the structures that are needed to support that will, to ensure that all children do get to become whatever they want.

We don't need to do it all, but we must see that it all gets done.

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[2]The pure of heart model was developed by Tom Kibler to help explain why so many people are hesitant to collect and use data about the programs they love.

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Family Learning in Museums: Perspectives on a Decade of Research

KIRSTEN M. ELLENBOGEN,[1] JESSICA J. LUKE,[2] and LYNN D. DIERKING[2]

Abstract

This is an investigation of the growth of research on family learning in and from science museums over the last decade. To track this emergence we consider three issues: 1)shifting theoretical perspectives, resulting in a new shared language and set of beliefs,values, understandings, and assumptions about what counts as family learning; 2) realigning methodologies, driven by underlying disciplinary assumptions about howresearch in this arena is best conducted, what questions should be addressed, and whatcounts as valid and reliable evidence; and, 3) resituating the focus of our research to make the family central to what we study reflects a more holistic understanding of thefamily as an educational and the larger learning infrastructure. We discuss research thatexemplifies these three issues and demonstrates the ways in which shifting theoretical perspectives, realigning methodologies, and resituating research foci signal the existenceof a nascent field of research.

In the spirit of the In Principle, In Practice Initiative, this chapter discusses how research focused on family learning in and from museums has progressed over the last decade and shares some perspectives from the field regarding its usefulness for practice. Although families were clearly a dominant audience in museums, there were not significant numbers of researchers focusing on family learning until the mid to late 1970s. By the late 1980s, there was an extensive body of literature that established the importance of family learning in and from museums (c.f., Astor-Jack, Whaley, Dierking, Perry, & Garibay in this volume).

These early studies demonstrated the significance of families as a focus of museum research, identifying them as a major audience and unique learning group of mixed ages and backgrounds bound together by a complex shared system of past experiences, beliefs, and values. They also established the complex nature of family interactions, highlighting the ways in which family members interact and learn together and providing evidence that families bring an extensive array of personal and cooperative learning strategies to their experiences in museums. Much of this research was descriptive in nature, depicting family conversations, the roles adults and children assume, the influence of specific conversational rules on physical behavior, gender differences in parent-child interactions, and the similarities and differences between the conversations of families and all-adult groups.

Ten years later, we are reaping the benefits of influential conferences (e.g., Falk & Dierking, 1995; Paris, 2002), benchmark political reports (e.g., AAM, 1992), the realization of a long anticipated 'learning society' (e.g., Machlup, 1962; Hutchins, 1970; Falk & Dierking, 2002), and participation from researchers that represent increasingly diverse research backgrounds. We face a pivotal point as a community, with opportunities to offer insights and recommendations to those working with families in museums.

We highlight three aspects of this new research to support our assertion that important progress has been made which holds great potential for influencing practice in the area: 1) shifting theoretical perspectives that signal shared language, beliefs, values, understandings, and assumptions about what constitutes family learning; 2) realigning methodologies that are driven by underlying disciplinary assumptions about how research in this arena is best conducted, what questions should be addressed, and criteria for valid and reliable evidence; and, 3) resituating research foci to ensure that the family is central to learning, reflecting a more holistic understanding of the family as an educational institution within the larger learning infrastructure. We also explore connections between the theory and practice of family learning in museums, featuring reflections written by three museum professionals, highlighting their perceptions of what the progress in research has meant for developing meaningful museum experiences for families.

Shared Language, Beliefs, and Values of the Field A major shift in the last decade of family learning research in museums stems from the use of sociocultural theory in learning research and a recognition of its suitability for museum research. Such a perspective frames learning in and from museums as socially and culturally constructed through people's actions within a specific community of practice. A community of practice shares a set of values, vocabulary, understandings, and assumptions (Wenger, 1998). A person's actions and interactions are interpreted by members of their group (Green & Meyer, 1991; Gumperz, 1982), allowing them to construct meanings specific to the group through their conversations (Geertz, 1983; Green & Dixon, 1993). This shift may seem subtle, but the implications of embracing a

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sociocultural perspective are significant. Studies from this perspective focus not just on the immediate experiences of the family group in the museum, but more broadly on the ways in which the family group is situated within the larger social and cultural context. It necessitates understanding the shared meanings, processes, artifacts, symbols, and identities that families construct as they participate within a specific community of practice, more fully revealing the nature of the learning processes and products.

Although there has been research on families' conversations in museums for more than a decade (c.f. Astor-Jack, Whaley, Dierking, Perry, & Garibay in this volume), this research more generally described how families interact and talk about topics presented in exhibitions and programs. Family members talk about what they know from previous experiences, discussing what they see, hear, read, and do in relation to their family experiences and memories. This research also demonstrated that these discussions provide opportunities for family members to reinforce past experiences, family history, and to develop shared understandings.

The recent dominance of sociocultural perspectives in museum research build on the early studies of family conversations and enables current investigators to pursue a depth of understanding about family conversations and their role in identity building and other social and cultural aspects not understood previously. In particular, these perspectives have afforded opportunities for more in-depth investigation of the meaning and uses of conversations (c.f., Leinhardt, Crowley, & Knutson, 2002). Recent studies of families' conversations emphasize the processes families engage in to construct meaning and build identity, and the role of the museum experience in the family's larger social and cultural context (Ash, 2003; Crowley et al., 2001; Ellenbogen, 2002).

One study conducted as part of the Family Learning Initiative, a systemic research effort at The Children's Museum (TCM) of Indianapolis, illustrates the recent theoretical focus on the family group and the shared meanings they construct through participation in the larger social and cultural context (Luke, Cohen Jones, Dierking, & Falk, 2002). The study (examined the long-term impact of two youth-based museum programs on young adults and their families. Findings demonstrated that these programs influenced participants' attitudes, interests and awareness. However, the focus was not just on the impact at the level of the individual. The study employed a social systems approach to understand the long-term impact of participation in these two TCM program experiences within a larger sociocultural and developmental context. Within this expanded approach, findings demonstrated that these programs influenced family dynamics, giving young adults the opportunity to explore new roles within their family, gain new perspectives and identities within the family system, and learn new things about family members. There was evidence that interests that young adults developed within the program were carried over into the family context, resulting in shared family interests.

Programs also influenced young adults' contributions and connections to the larger sociocultural community, fostering a tolerance of other people and cultures, and cultivating a sense of civic responsibility. These results suggest that a research perspective informed by sociocultural theory highlights not only the learning of the individual, but also learning at the level of social groups, such as family and community. Such shifts in theoretical perspectives also allow researchers to understand learning that is broader than content knowledge, such as learning to communicate with others, learning new things about family members and the family dynamic, and learning a sense of civic responsibility. These findings are building a shared language and set of beliefs and values in the field and are evidence of the progress that has been made in family learning research in museums over the last decade.

Realigning Methodologies In the last ten years, researchers have attempted to more broadly and deeply investigate the nature of family learning in and from museums utilizing a variety of methodologies. Some of these methodologies are borrowed directly from other disciplines; others are unique improvements upon what has been developed previously. This change in methodologies is a natural realignment that accommodates shifts in assumptions about how research is best conducted, what questions should be addressed, and what is agreed upon by the community as valid and reliable evidence of family learning.

Researchers are adopting diverse methodologies that include discourse analysis, video and audio recording of moment-by-moment interactions, pre-, post-, and post-postinterviewing, journaling, talk-aloud cued visits, and providing family members with cameras as a documentation and meaning-making tool, all in an attempt to better understand and document the role that museums play in families' lives. These innovations are due, in part, to the strength of recent funding catalysts in the field that have supported conferences and research collaborations. In addition, museum researchers have become more aware of cutting edge research on family

learning in other fields of research (e.g., Moussouri, 1997). Innovations in methodologies have also arisen organically as researchers draw upon their diverse training backgrounds and adapt preexisting methodologies to family learning research in museums.

An example of the ways in which new methodologies have informed our understanding of family learning in museums is a multi-city, multi-museum study focused on exhibit characteristics, family behaviors, and family conversations designed to identify the characteristics of exhibits that encourage family interaction (Borun et al., 1998). Multiple testing of the audio-taping methods used to record families' conversations resulted in a measure of the correlation between families' physical and verbal interactions and their learning, as measured through an interview process after families left an exhibition. Findings suggest that families engage in three levels of discourse: identifying, describing, and interpreting and applying. Findings from the second phase of the project concluded that families are learning from museums, but parents' mediating strategies are sometimes not the most effective for facilitating science learning.

Another example is Personal Meaning Mapping (Falk, Moussouri, & Coulson, 1998) which is based on concept mapping techniques and allows participants to respond to a concept, topic, or experience in their own way. Researchers then use a structured system to code responses and conduct a quantitative analysis of the qualitative data. In a study investigating families' understandings of evolution (Luke, O'Mara, & Dierking, 1999), groups were encouraged to work together to write (or draw) anything that came to mind when they thought about a topic prompt. As they wrote and discussed their ideas, researchers recorded these negotiations to capture the family dynamic at work. Researchers used families' responses as prompts for a follow-up interview with the group. In this way, PMM allowed researchers to start with families' individual and collective perceptions of the topic and pursue their understandings in greater depth using their own language and terminology.

The realignment of methodologies has also pointed to the need to extend research over time. Some of the earliest museum learning research (Robinson, 1936), as well as recent calls for such research designs (Falk & Dierking, 1995), note the importance of understanding what people do before and after their museum visit. Most commonly, an extended approach is taken by conducting a follow-up interview with families weeks, months, and even years after the museum visit. Researchers have repeatedly shown that many of the conversations that begin in the museum continue once families are back in the home (c.f., Astor-Jack, Whaley, Dierking, Perry, & Garibay in this volume). In addition, families are able to describe specific exhibitions and program elements without prompting, indicating the general durability of the museum experience.

For example, a study of the impact of a genetics exhibition included follow-up telephone interviews with a sample of families who had visited the exhibition approximately six weeks earlier (Luke, Coles, & Falk, 1998). Families reported that they talked about the exhibition in the car on the way home, over dinner in the following weeks, or while engaged in some other activity, and described connections between the content in the exhibition and other circumstances or phenomenon in their lives.

Ethnographic case studies that involved long-term relationships with a set group of families who visited museums frequently, allowing repeated observations and interviews before, during, and after museum visits (Ellenbogen, 2002, 2003), suggested that conversational connections among museum experiences and real-world contexts are frequent and pervasive.

A More Holistic Understanding of the Family as a Learning Institution

Shifting research to a new theoretical perspective and realigning methodologies are critical steps in moving family learning research in museums forward. The empirical work emerging in the last decade focuses on families and their conversations, and examines learning beyond the walls of the museum. However, this is not enough; with this approach we are in danger of only superficially documenting the nature of family learning. At a broader level, we must understand family culture as dominant, resituating the focal point of what we study from the museum agenda to the family agenda, understanding the family as a learning institution within the larger learning infrastructure they inhabit, and the culture in which they function.

The term 'family agenda' (in contrast to 'museum agenda') highlights the need for museums to not only be aware of themselves as resources for learning, but also aware of what each family might choose to take from the experience and each family's role in museum learning (Falk, Balling, & Liversidge, 1985; Hilke, 1987). This inverted point of view highlights the reality that families bring resources with them, which in turn influence the ways they interpret their museum experience. The term 'family agenda' emphasizes the need to recognize and accommodate the resources

families bring to the museum in order to create a successful family learning context. Researchers have argued that families not only have agendas for their museum visits, but that these agendas directly influence the impact of the museum experience.

A radical interpretation of the notion of family agenda suggests that research that strives to fully understand how families learn in and from museums should situate itself within the educational institution of the family. Once the family is the starting point, the museum becomes one of many learning resources that the family uses. From this point of view, the position of the museum within the learning infrastructure (Falk & Dierking, 2002; Lewenstein, 2001; St. John & Perry, 1996) depends on the culture of the family—a more realistic reflection of real-world experiences.

When the focus of the research is resituated to a family-centric perspective, identity-building becomes more significant. Identity is socially situated with respect to people's ongoing membership in specific communities of practice (Wenger, 1998). In Wenger's view, people's development of identities is an integral aspect of their participation in the practices of a community. Learners are members of a community to the extent that they have learned normative ways of thinking and acting that have been established by that particular community. Much of this learning is implicit and involves assumptions and rules about particular ways of speaking and participating in that community.

Consequently, identities are not fixed or static, but in a constant process of formation (Holland, 1998; Kress, 1995; Wenger, 1998). People construct and contest identities through what they do and say. The development and negotiation of identity is influenced not just by community, but also by the organizations and institutions of the community. The museum, like all educational institutions (Bruner, 1996), can be seen as a place of enculturation (Pearce, 1994). Enculturation involves developing identity as a part of a community, and the museum is one of the organizations that influence this activity. From this perspective, (e.g., Ivanova, 2003) we can begin to examine museums and other institutions in the learning infrastructure as places for building and affirming identity.

Consider the findings of a study investigating a partnership among The Franklin Institute Science Museum and three inner-city Philadelphia schools designed to cultivate collaboration between teachers and parents in support of elementary children's science learning (Luke, Bronnenkant, & Dierking, 2003). Interviews with parents revealed that after only one year, participating families integrate elements of the program into their family life. In addition, parents feel that the program activities change their family learning dynamic, giving them an opportunity to step outside their traditional role as homework 'dictator,' to instead work alongside their children to do activities and feel comfortable not having all the answers. Similarly, in the ethnographic case studies of family learning described earlier (Ellenbogen, 2003), families were found to use supporting interaction strategies across learning environments. Most interestingly, the families over time, used seemingly unrelated interactions in museums and at home to construct their family identity.

Studying the families' interactions across multiple learning environments provided a needed lens for understanding the complex motivations underlying the families' practices in the museum. Findings suggest that museums can be tools for enculturation that families use to establish and negotiate their identity. In other words, the museum is context, not content. The subject of investigation thus becomes the ways in which family members come to make meaning through their interactions in a setting, rather than the setting dictating those interactions and any subsequent learning. The families themselves function as learning institutions, drawing upon museums as one of many tools they have to build family identity. This focus on the family as central to the meaning-making process is additional evidence for how the development of family learning research in museums over the last decade has led to a resituating of research foci, with the hope of ultimately providing useful insights that can shape exhibitions and programs that enable families to shape and affirm their identities.

Conclusions

The last decade has witnessed a marked increase in our understanding of how, what, when, and where families learn in and from museums. Three aspects of recent research provide evidence for the importance and relevance of this field and the progress that has been made. First, shifts in our theoretical perspectives, with a new focus on the family as a type of social group and the shared meanings they construct, have resulted in a shared vocabulary and set of beliefs, values, and understandings about what constitutes family learning in museums. Although classification and semantic arguments, such as the accuracy of indicators of learning, or the definition of the term 'family,' still occur, they are a natural outcome of an

emerging community of research which is vetted and debated by a group of researchers with shared interests, but different backgrounds and approaches.

Second, a realignment of our methodologies, including the adoption of new and alternative strategies for documenting the role of the museum in family life, has united many of us in the pursuit of similar questions. Although there is variety in what constitutes valid and reliable evidence for family learning, shared values and ideas about how to best investigate it are emerging within the community.

Third, ensuring that the family is the central focus of our research has resulted in an understanding of the family as a learning institution, utilizing the free-choice learning resources of an extensive learning infrastructure in order to construct and affirm individual and collective identities. The last decade of research has produced significant evidence of the ways in which the museum provides a context for such identity-building. There is growing agreement that family learning is best examined from the perspective of the family and the larger learning infrastructure.

However, the real evidence that we are making progress in this arena will be a discernable difference in the next decade of family learning research and practice in museums, perhaps even an influence on research and practice in the broader museum community. A similar exercise of reflecting upon the last decade of research ten years from now should result in definitive evidence for changes in research and practice. What would constitute definitive evidence for these changes?

First, we would see a well-established, shared vocabulary and set of beliefs, values, and understandings about what constitutes family learning. Although healthy debate would still be a natural part of this community of research and practice, the nature of the arguments would be different. The community would no longer debate the definition of the term 'family' or argue about indicators of learning; instead they would engage in conversations about the nuances and subtleties of family learning in museums and investigate questions such as: How do families appropriate the museum experience and use it to support their own needs? How do the experiences families have in museums relate to their other learning experiences? Practitioners would find the research useful to their practice and be able to utilize it to improve their abilities to support family learning and identity-building. The community of researchers and practitioners would be drawn together by shared interests, with respectful and productive ways of talking together and debating these issues.

Second, we would see new and refined strategies for facilitating and documenting the role of the museum in family life. Although there would still be some variety in what constitutes valid and reliable evidence of family learning, there would be accepted ways of framing, facilitating, and investigating family learning within the community. There also would be some consistency in the important questions to be resolved in the field and the methodologies used to investigate these questions. Methodologies that are sensitive to social interaction, such as discourse analysis, video and audio recording of moment-bymoment interactions, journaling, and talk-aloud approaches, would be well-established, commonly-used approaches. These approaches would be integrated into practice in meaningful ways also.

Last, it would be understood that a meaningful examination of the nature of family learning in the museum, requires a central focus on the family. The family would be seen as a learning institution that utilizes the learning resources of an extensive learning infrastructure to build its individual and collective identity. No one would dispute that family learning is best examined and supported from the perspective of the family and the larger learning infrastructure.

A key indicator of the progress made in family learning research over the last decade is the extent to which this empirical work informs the work of practitioners. What has family learning research meant to exhibition and program developers? How do they use this research to influence their work? Here are the reflections of three practitioners; we hope that their stories will provide useful information to other practitioners eager to integrate more research-based approaches into their activities and to researchers regarding investigations which are most helpful to furthering practice.

Cathleen Donnelly, Exhibit Developer, and Leslie Power, Director of School Services & Family Programs, The Children's Museum of Indianapolis (TCM)

Both of us became a Family Learning Leader, by participating in a comprehensive professional development program designed to build internal capacity about familylearning among key management staff, representing educators and exhibit developers, but also membership, curatorial, visitor and volunteer services. The goal was to build our capacity in family learning and to help us develop skills to inspire our staff, andultimately to mentor and coach them in the principles of family learning. The training was rigorous, including four two-day seminars, advanced readings and assignments, field trips and a special project designed to integrate family learn-

ing research into the specificday-to-day tasks of the Leader. Here are two examples of how this experience has transformed our work at TCM.

Exhibitions Family learning research has changed the way we develop exhibitions at TCM. Previously, we developed, tested and evaluated our exhibitions based on their appeal to children. During the exhibit development process, we now consider the family a learning unit, and based on family learning research, we:

• Test exhibition concepts with children and adults in focus groups made up of family members of a variety of ages.

• Design interactives for family accessibility, collaboration and conversation. If we do not observe families playing and talking together, then the interactive is redesigned and re-tested. We developed a family learning matrix that incorporates a variety of family learning characteristics and is used as a tool by the core team as interactives are designed and tested.

• Select objects based on what we hear and see families engaged with as they view informal artifact displays and interact with curators. If we can determine which objects spark interest, encourage conversation and help families make personal connections, we know we will be more successful in attracting and holding their attention within an exhibition.

• Write labels to be read aloud—either between a parent and a child or a sibling and a sibling—and content is geared towards helping families make personal connections. Font style and point size are designed for a wide age range—from beginning readers to grandparents.

School Services & Family Programs Family learning research has directly influenced my work developing family programs and school field trip programs at TCM. Based onfamily learning research and the museum's mission of reaching children and adults, the education department decided to eliminate all school-age programming including summer day camps, replacing this programming with programs specifically designed forfamilies. The challenge and goal of the family programs is to provide a range of familylearning experiences that foster family interactions and meet the developmental needs of a variety of ages. We now offer family trips, family nights at the museum, family nightsat local schools, and programs for homeschoolers.

The most exciting aspect of my work currently, which is a direct result of the Family Learning Initiative we have been engaged with in collaboration with the Institute forLearning Innovation, is the addition of a Public Scholar position at Indiana University-Purdue University Indianapolis (IUPUI). IUPUI and TCM collaboratively hired a Public Scholar of Museums, Families, and Learning in the fall of 2005. This shared positionrequires a great deal of collaboration between IUPUI's Museum Studies program andSchool of Education and TCM. One area of future study will investigate the role of chaperones with small groups of students, determining whether current research onfamily interactions in museums can be extended to such groups.

Dale McCreedy, Director, Gender and Family Learning Programs, Franklin Institute Science Museum

In considering how family learning research has informed my own practice, I needed to think back across my 18 years in the field. Although it is difficult to imagine my efforts within the field not being informed in some way by research, the question that arises for me, is 'Which body of research has been most influential?'

In the early days of my work, gender research was most salient. This included the work of Sue Rosser, the American Association of University Women (AAUW), and many studies acknowledging the invisibility of females and minorities in texts, as role models, and within museum exhibitions. "My Daughter the Scientist," an exhibition developed by Chicago's Museum of Science and Industry in the mid-80s, was a critical first step in bringing issues related to women and science into the public eye. As the importance of adults as gate-keepers to girls' science learning emerged, the research in teacher education, parent support, and adult learning became more relevant, as did feminist learning theory. However, though this literature was helpful, it was only after sociocultural ideas about learning and meaning-making became more developed, and the negotiation of identities was articulated as learning, that there seemed to be a coherent link from this work to the arena of family learning in museums.

Fortunately, what has emerged in more recently published literature within the field is the growing awareness of identity and learning as being interconnected and the critical role that a Community of Practice or sociocultural infrastructure plays in identity development. By using a sociocultural framework to inform our work at The Franklin Institute, we have been able to move beyond the individual as the focus of analysis to the interconnection of individual (s) and community, in ways

that take into account shared perspectives, understandings, and co-evolutions. To provide a specific example, our work with Parent Partners in School Science (PPSS) discussed earlier in this chapter, has benefited from cutting edge theories on family engagement in schools proposed in a 2004 study by Barton, Drake, Perez, St. Louis, and George. This study has led us to question the existing paradigms about parent involvement in schools and develop new questions about what parent involvement really means. As we continue to explore the impact of a program designed to build connections between home and school, we have begun to look more closely at what Barton, et al. propose—i.e., a shift away from the focus solely on what parents do to engage with their children's school activities to a focus on how and why parents are engaged, and the complex ways in which their engagement occurs. In our efforts to understand the successes and challenges within PPSS, we are using this parent engagement framework to document the ways in which the program has brought teachers and parents together in support of children's science learning in and outside of school. The consideration of impact within this theoretical framework was compelling to us because it helped us see parent engagement as a dynamic, relational phenomenon, not just about trying to get parents involved in schools, but rather, getting parents and teachers to engage with one another across home and school contexts. The success of this model in facilitating our work suggests that such changes in understanding dynamics and relationships have great potential for influencing the work of the entire museum community.

[From the St. Pioneer Press, August 17, 2008]

Scientific Literacy—It's Not Just for Scientists

By DR. ERIC J. JOLLY

No one would think it's OK to be illiterate. No one would brag, "I don't read." But literacy doesn't end at the back cover of a book. The need for essential science literacy—the ability to understand and engage in the issues of science and technology that shape our culture—has exploded in the past few decades. Our air, water, health and our economy are all profoundly affected by the choices we make. It's simply not wise—no matter how long it's been since your last chemistry class—to say, "I don't get science."

But don't panic. We're smart and capable in these parts. Let's start with some definitions. What does it mean to be scientifically literate? Scientifically literate people don't need to have a bottomless well of science knowledge. You don't even need to have a mental file of science facts that you consult. What you need is a curious mind and critical thinking skills.

Don't worry as much about the science classes you took in college—think more about critical thinking skills, and ask lots of questions.

A scientifically literate person knows there is power in language that needs to be understood; for instance, in science, a theory isn't a best guess—it's a formal hypothesis that's been tested and revised. All research isn't created equal—the best is conducted by scientists with a background in the area being researched and published in peer-reviewed journals. Sometimes the results are detailed and narrow, making them most important to other scientists; other times the study is broad, lengthy, and has more significance to the general public. And scientifically literate people know that most disagreement among scientists occurs in details, just as most scientific advancement is made by tiny steps. The Galileos and Einsteins are far outnumbered by scientists in labs conducting and replicating laborious research.

It's no surprise that advances in science and technology are everywhere. They're in the key-card we use to access our office buildings or hotel rooms. They're in the genetically modified foods we eat and the pharmaceuticals we ingest to keep our bodies healthy. We consume this technology every day, but using it isn't the same as understanding it. As these advances creep into every part of our lives we've become increasingly less and less able to keep up with science policy and control how it affects our culture and our democracy.

Yes, science really does affect our democracy.

Let's get one thing straight. Science literacy is different from reading and writing. Once you've learned to read, you can read forever. Science is changing. Constantly. The nature of the scientific method is to establish a base of knowledge and then constantly expand and adjust it. That's why the best practices can change over time—30 years ago, doctors recommended babies sleep on their stomachs and drink formula. Now, doctors recommend babies sleep on their backs and drink breastmilk. When baby boomers were in school, space exploration to the moon was cutting edge. Today's students learn about robotic spacecraft missions to Mars and beyond. Literate citizens can glean information from newspapers, magazines, websites, and

books about the issues at stake. But scientifically literate people can analyze the data and ask informed questions about the ethical, social, and economic implications.

When we have dynamic civic engagement around issues of science, we do more than create a healthy environment and a better quality of life. We create economic opportunity and a better future. Science deserves the same vigorous debate as the economy or education; not surprisingly, the topics often overlap.

A good example lies right outside the Science Museum of Minnesota, where a major effort is under way to devise a plan to clean the Mississippi River, which has been declared impaired. We know there are very high levels of phosphorus, which cause high levels of algae. We know there is enough sediment flow to fill a dump truck every 10 minutes. And we know that 90 percent of the pollution runoff comes from the Minnesota River watershed, even though only 25 percent of the water comes from that river. Why? Because the majority of the Minnesota River watershed is in agricultural row crops, which utilize pesticides. Two of our state's great sources of pride—our agricultural heritage and our great river—sometimes represent competing interests, especially are sometimes in direct conflict as the market for ethanol and biodiesel fuels continues to grow. Repurposing crops we eat into crops we drive has huge economic and social impacts at home and abroad. How can we halt or reverse the damage to the river without hindering unnecessarily restraining the free market? It's up to Minnesota's scientifically literate citizens to decide.

So how can we advance our science literacy? It's easy to make small changes. We can start with simple things: asking our newspapers to cover more science, reading science magazines like Discover, Popular Science, National Geographic, and Scientific American, and tuning in to NPR's "Talk of the Nation: Science Friday" and PBS's "NOVA."

We can also look for comprehensive science-based solutions for issues that impact public policy. We can support the creation of a science advisor to the governor—many states have one, Minnesota does not—and a science advisory panel for the Legislature. Science advisory panels not only help our leaders to be informed, but also help us track the key issues we face as a state by bringing legislative topics back into our communities. And we can ask candidates about their positions on these critical science issues during campaigns and debates.

Minnesota has historically maintained a solid strong compass to guide the level of risk we are willing to take—and the price we are willing to pay—for an environment that's healthy for our children. As a state we've always taken pride in our well-educated citizenry, quality schools, and arts and culture. Now, as we move though this new era of scientific revolution, there are more reasons than ever to gather knowledge and participate.

Citizens can—and should—get involved in critical scientific debates that will direct how we live in the future. Join in the conversation. There's plenty to talk about.

Dr. Eric J. Jolly is president of the Science Museum of Minnesota. The museum served more than 1.2 million Minnesotans in the past year, working to achieve science literacy through visits, classes, teacher development, outreach, and research. His e-mail address is eric.jolly@smm.org

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BOARD/INSTITUTIONAL MEMBER COPY

March 7, 2001

To: *Ed Able, Jason Hall, and Pat Williams, American Association of Museums*

From: *Celinda Lake, Daniel Gotoff, and Thaddeus Windt, LSPA*

Subject: *Report on Findings of Research*

The following memo summarizes key findings from a nationwide poll on Americans' perceptions of museums, of their importance as an educational resource, and of their trustworthiness as sources of objective information.[1] In a time of enormous cynicism about public institutions, museums are viewed as one of the most important resources for educating our children and as one of the most trustworthy sources

[1] Lake Snell Perry & Associates designed and administered this survey which was conducted by phone using professional interviewers. The survey reached 1000 adults age 18 or older nationwide. The survey was conducted from February 5th—8th, 2001. Telephone numbers for the survey were drawn from a random digit dial sample (RDD). The sample was stratified geographically by state based on the proportion of adults who live in each state. The data was weighted to reflect Bureau of the Census estimates of age, education and area of residence. The margin of error is +/− 3.1%.

of objective information. Furthermore, this confidence in museums is consistent among a broad range of demographic groups and in all regions of the country.

Overview

• Among a wide range of information sources, museums are far and away the most trusted source of objective information. No other institution has a similar level of trust. Books are the second most trusted source of information followed by television news. Newspapers, the Internet, radio, and magazines are not considered trustworthy by most Americans.

• The public's trust in museums is based on three themes: they present history, they are research-oriented, and they deal in facts. All Americans, regardless of the level of their trust in museums, cite history and facts as the top factors that make them consider museums trustworthy. It should be noted that the small minority of Americans who find museums less trustworthy see less emphasis on research.

• People are almost evenly divided on whether museums are trustworthy because they present first-hand interaction with past events and history and/or because they offer independent and objective information.

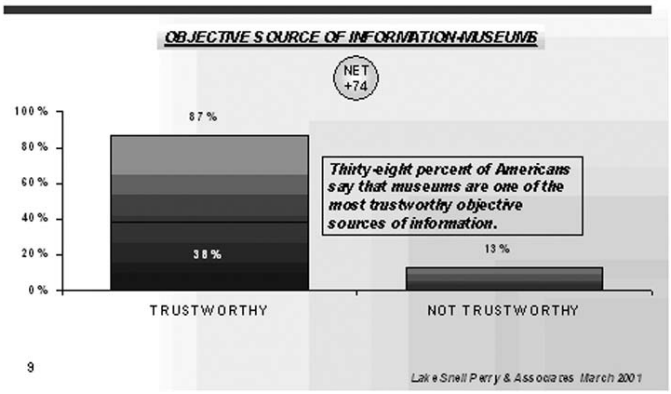
• While schools are number one, public libraries, and science centers and children's museums comprise a top tier of institutions that people believe are important resources for educating our children.

• One-third of Americans say they have visited an art museum, a history museum, an aquarium, zoo, botanical garden, or science and technology center within the past six months. Almost a quarter have gone within the past year. One in five Americans visited more than a year ago and about one in five last visited a museum more than five years ago.

Sources of Information

Among a wide range of information sources, museums are far and away the most trusted source of objective information. Thirty-eight percent of Americans believe museums are one of the most trustworthy sources and 87 percent believe they are trustworthy overall. Just 13 percent say that museums are not trustworthy, with only 1 percent saying that they are not very trustworthy. No other institution has a similar level of trust. Books are a distant second as a trusted source of objective information (18 percent one of the most trustworthy, 61 percent trustworthy, 36 percent not trustworthy). A majority of people do not trust the other more frequently used media. People split on television news (10 percent one of the most trustworthy, 49 percent trustworthy, 50 percent not trustworthy) and rank newspapers (8 percent one of the most trustworthy, 34 percent trustworthy, 65 percent not trustworthy), the Internet (5 percent one of the most trustworthy, 23 percent trustworthy, 66 percent not trustworthy), radio (3 percent one of the most trustworthy, 28 percent trustworthy, 72 percent not trustworthy), and magazines (3 percent one of the most trustworthy, 22 percent trustworthy, 76 percent not trustworthy) as untrustworthy.

AMERICAN ASSOCIATION OF MUSEUMS
Enhancing the ability of museums to serve the public interest



Americans of every demographic group, including gender, age, and education, as well as in every area of the country, believe that museums are a trustworthy source of objective information by at least 80 percent or more. Indeed, even some of the

most cynical audiences in our society such as younger non-college educated adults display a remarkable level of trust in museums (42 percent one of the most trustworthy, 87 percent trustworthy). Indeed the younger generation (under the age of 30), which is the most Internet savvy, rates museums far more trustworthy (44 percent one of the most trustworthy, 87 percent trustworthy) than the Internet (8 percent one of the most trustworthy, 28 trustworthy, 66 percent not trustworthy).

• Another reason why Americans consider museums trustworthy is that they are "family-friendly." Eighty-eight percent of parents find museums to be trustworthy and almost four in ten (39 percent) say that they are one of the most trustworthy sources of objective information. Eighty-six percent of dads and 89 percent of moms believe museums are trustworthy (39 percent each one of the most trustworthy).

Demographically and regionally, the groups that tend to find museums most trustworthy are:

• People under 30 (44 percent one of the most trustworthy, 87 percent trustworthy)

• People who visited a museum within the last year (44 percent one of the most trustworthy, 89 percent trustworthy)

• Mid-Atlantic residents (43 percent one of the most trustworthy, 90 percent trustworthy)

• Service or retail employees (43 percent one of the most trustworthy, 87 percent trustworthy)

• Younger non-college educated adults (42 percent one of the most trustworthy, 87 percent trustworthy)

Though solid majorities of these groups still find museums trustworthy, the groups that are least likely to intensely think museums are trustworthy are:

• People living in the Midwest (34 percent one of the most trustworthy, 84 percent trustworthy)

• Seniors (28 percent one of most trustworthy, 83 percent trustworthy)

• Skilled blue-collar workers (28 percent one of the most trustworthy, 85 percent trustworthy)

Sources of Trust

The top three reasons people offer for why they find museums trustworthy are that they present history (28 percent), they are research-oriented (12 percent), and they deal in facts (10 percent). All other reasons offered by people were in the single digits.

REASONS WHY PEOPLE CONSIDER MUSEUMS TRUSTWORTHY
o *History/historical (15 percent),*
o *They have historical displays/documents/artifacts/historical artifacts/historical facts (13 percent),*
o *They do research/exhibits and displays backed up by research (12 percent)*
o *They present facts (general) (10 percent),*
o *They have accurate information/independent source of knowledge (8 percent),*
o *They teach history/allow people to learn about history/relive history (6 percent),*
o *They are staffed by professionals/have experts to do the research (4 percent),*
o *They are run by non-profits/not out to make money/not selling anything (4 percent),*
o *Can judge for yourself/allow people to learn for themselves (3 percent),*
o *They are trustworthy/trustworthy information (3 percent),*
o *They are good for children/teaches children (2 percent),*
o *Longevity/landmarks (1 percent), and*
o *They have different exhibits/different information (1 percent)*

Most Americans say presenting history is the main factor driving their trust in museums. However, younger college-educated people (19 percent), college-educated women (17 percent), moms (17 percent), rural residents (17 percent), college graduates (16 percent), parents (16 percent), younger women (15 percent), and people employed in white collar managerial jobs (14 percent) all say that research is the most important reason why they trust museums.

Some of the specific things people say about research as a reason for museums' trustworthiness are that:

• "They have the experts who have time to research things thoroughly"

• "The research that goes into the displays"

• "I would expect that there is a lot of research involved before they put a display together"

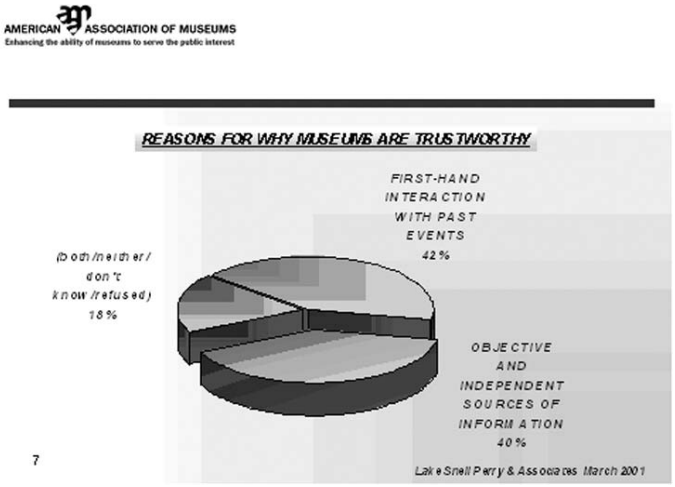
Americans who find museums trustworthy, and those who do not, both cite history and facts as the top reasons for trusting museums. Those who find museums less trustworthy, however, place less emphasis on research than other factors.

First-Hand Interaction with Past Events vs. Objective and Independent Source of Information

There are two schools of thought as to why people believe museums are trustworthy. One school of thought says that people find museums trustworthy because they give people the opportunity to interact first-hand with objects, past events, and new information. It further contends that this type of direct, personal contact allows people to reach their own conclusions and think about the subject matter for themselves, with family and friends.

Another school of thought says that people find museums trustworthy because they are more independent and objective than other sources of information. Museums are fairer in presenting different points of view because they are centers for research, whose central mission is to present the truth about their subject area.

In fact, Americans are divided as to which school of thought comes closer to their own point of view. Forty two percent say that first-hand interaction with past events comes closer to their own point of view, while 40 percent say it is because museums have more objective and independent information. Because Americans are evenly divided between these two theories and the two are not mutually exclusive, it suggests that both viewpoints are valid.



Like the public overall, most groups divide. However, demographically and regionally, the groups that are most likely to say first-hand interaction comes closest to their own point of view are:

- People employed in unskilled blue collar jobs (50 percent)
- People employed in white collar managerial jobs (50 percent)
- Seniors (49 percent)
- People under the age of 30 (47 percent)
- People who find museums less trustworthy (46 percent)
- People who live out West (46 percent)
- Southerners (45 percent)

The groups that say objective and independent information comes closest to their own point of view are:

- New England residents (45 percent)
- People between the ages of 40-64 (45 percent)
- People who last visited a museum more than 5 years ago (45 percent)
- Residents in rural areas (45 percent)

Resources for Education

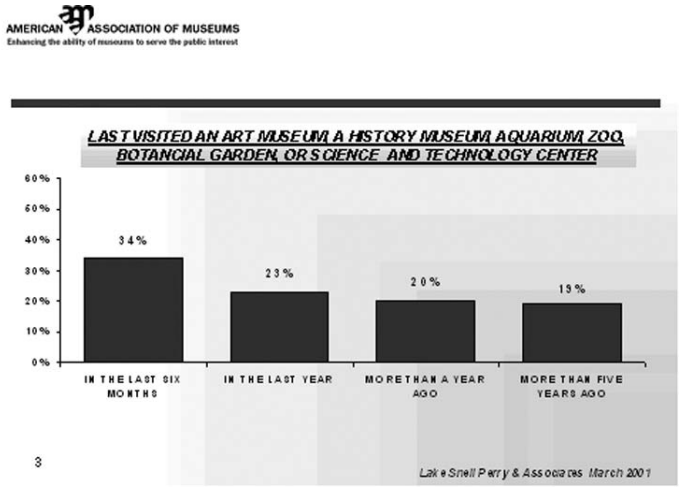
The vast majority of Americans perceive museums to be an important educational resource as well. Interestingly, non-parents are no less likely than parents to assign museums a high level of importance in this regard. Schools, not surprisingly, are the most important education institution (76 percent most important, 98 percent important). However, public libraries (36 percent most important, 93 percent impor-

tant), and science centers and children's museums (29 percent most important, 86 percent important) also comprise a top tier of institutions that people believe are important resources for educating our children. Other types of museums are also rated as most important or very important to a high degree.

Seniors, younger women (29 percent each most important), and New England residents (38 percent most important) put greater importance on art and history museums while Midwest residents put less emphasis on libraries (27 percent most important). Those people who indicate that teaching history is the main factor driving their trust in museums, not surprisingly, find museums even more important as an educational resource, especially science and technology centers, children's museums (34 percent most important), and art and history museums (37 percent most important).

When Americans Last Visited a Museum

One-third of Americans (34 percent) say they have visited an art museum, history museum, aquarium, zoo, botanical garden, or science and technology center within the past six months. Almost a quarter (23 percent) visited within the past year. Additionally, one in five Americans (20 percent) have gone more than a year ago and about one in five (19 percent) last visited a museum more than five years ago.



Younger people, those under 30 (43 percent visited in the last six months), and college educated people (50 percent visited in the last six months) are more likely to have visited a museum recently, while seniors (19 percent visited in the last six months) and people without a college degree (26 percent visited in the last six months) are less likely to have visited. Those who work in professional white collar jobs are also more likely to have gone to a museum recently (50 percent visited in the last six months) while retirees are the least likely (17 percent visited in the last six months).

Parents of younger children are also more likely to have visited recently. Forty-two percent have visited in the last six months than compared to 30 percent of non-parents. However, dads (49 percent visited in the last six months) are more likely to say they have recently visited than moms (37 percent visited in the last six months).

Across the country, people living in the Northeast (38 percent visited in the last six months) and the West (40 percent visited in the last six months) are the most likely to have visited a museum recently, while people living in the Midwest (31 percent visited in the last six months) and in the South (30 percent visited in the last six months) are less likely. Furthermore, people living in large cities (population 1 million or more people) are the most likely to have visited a museum recently (42 percent visited in the last six months), followed by people who live smaller cities (35 percent visited in the last six months). People who live in suburbs, small towns, and rural areas are less likely to have visited a museum in the last six months (32 percent, 30 percent, and 30 percent, respectively).

In conclusion, museums are not only perceived to be a very important resource for educating our children. They are also seen as the most trustworthy source of objective information available—even more than television, radio, newspapers, books

and the Internet. Furthermore, there's remarkable consensus among all Americans as to the value they place on museums. Even among groups of people who visit museums less frequently, museums are seen as an important educational resource and extremely trustworthy. In an age of ever increasing cynicism, museums have the unique distinction of being one the few institutions that work to unite all Americans.

Learning Outside of Schools

KIRSTEN ELLENBOGEN, PH.D., *Science Museum of Minnesota*

By the age of eighteen, a child will have spent, at most, nine percent of his or her lifetime in school (U.S. Department of Education, 2000). This conclusion is comparable to estimates made more than three decades earlier (Jackson, 1968). Jackson's argument is that if a child spends about six hours a day in school, and is present for each of the one hundred and eighty days required by most states, he will spend little over one thousand hours in school in a year. This is a low estimate of the time spent on schooling activities, as it does not consider time spent on homework. But it is a generous estimate as it assumes perfect attendance, and counts all of the time spent in school as a schooling activity, including activities such as lunch and recess.

Eight to nine percent of a childhood is a great deal of time for one single activity such as schooling. But from the perspective of examining all opportunities for learning, it must be understood as a weak intervention or "low dose" (Sosniak, 2001). It is, upon reflection, commendable that schools have such an impact after only taking up eight to nine percent of childhood. It is worth adding that in a life of seventy-five years, barely two percent of a person's time will have been spent in schooling. Other educational influences, such as home, community, media, and society must be considered in a complete survey of a person's learning experiences. Herein lies the importance of learning outside of school.

What are the learning possibilities of time-out-of-school? Examining the informal learning experiences of an eighteen-year-old requires the consideration of ninety one to ninety two percent of his or her time. Granted, the activities of playing and critical self-maintenance (e.g., sleeping, eating, and washing) take up a significant amount of time. But we are still left with an extensive educational infrastructure that includes non-school institutions (e.g., libraries and museums), organizations (e.g., community, church and scouting groups), and media (e.g., books, newspapers, magazines, television, film, radio, and the Web) (St. John & Perry, 1996). Although the existence of this infrastructure is contested (e.g., Luke, Camp, Dierking, & Pearce, 2001), significant evidence suggests that at the least, the groundwork has been laid for a series of connections across institutions, organizations, and communities that allows interaction, communication, and progress (Falk, Brooks, & Amin, 2001; Lewenstein, 2001; St. John & Perry, 1996). Although the definition and extent of the learning infrastructure is contested, it is more readily agreed that the functions of the infrastructure resources for learning outside of school and for connecting to school-based learning are not well understood.

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[Additional materials submitted by Ms. LeBlanc follow:]

["Quick Response Memo, Be Together, Learn Together," July 28, 2008, may be accessed at the following Internet address:]

http://edlabor.house.gov/testimony/2008-09-11-InstforLearningInnov.pdf

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OBERLIN VALUES IN ACTION:

From time to time, OAM will be spotlighting alumni entrepreneurs whose work reflects their Oberlin ideals while also having an important impact on the larger world.

Child's Play

By Heidi Waleson
Photographs by Todd France

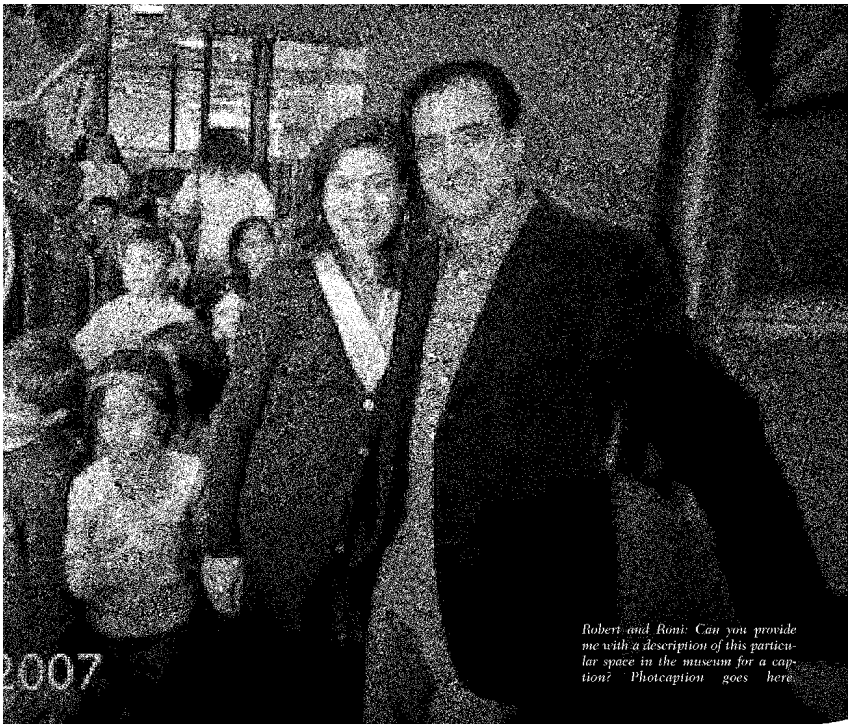
The Long Island Children's Museum gives kids a hands-on way to get excited about their world.

In 1989, three young couples, all residents of Long Island, New York, were having dinner together when the conversation turned to the dearth of activities for families with young children in their area. They talked about the children's museums they had visited around the country, when suddenly one said: "Why don't we start one?"

That impromptu moment of nearly 20 years ago has a very tangible result: The Long Island Children's Museum (LICM), a lively, hands-on institution with a $8 million annual budget, 100 employees, and 65 volunteers housed in a 40,000-square-foot former Navy airplane hanger in Garden City. It is a source of great pride to Robert Lemle '75, chair of Oberlin's Board of Trustees, and his wife, Roni Kohen-Lemle '76, two of the six founders, and who have remained intimately involved with the museum since its opening. To this day, Lemle has continued to take a leadership role, serving since 1996 as president, and now co-chair, of the museum's board.

On a recent January morning, school groups and parents with small children spilled into the museum's airy, colorful space. A tiny girl doggedly made her way through a winding two-story climbing structure, her mother watching from the ramp below. Mothers and toddlers congregated in the TotSpot, which boasts, among other Long Island references, a railroad car with a real Long Island Railroad seat. Small children used water tanks and wands to create enormous bubbles.

One group of children experimented with a visiting exhibition of eccentric musical instruments inspired by the work of the Blue Man Group theater trio. In the 150-seat theater, donated by the Lemles, the Blue Men themselves performed a 15-minute version of their show for an invited audience of dignitaries, press, and giggling children. Upstairs in one of the workshop spaces, the pervasive smell of fish portended a fish-dissection and cook-



Robert and Roni: Can you provide me with a description of this particular space in the museum for a caption? Photcaption goes here.

ing workshop. In the Pattern Studio, cleverly placed mirrors turned a single person into a whole kick line. In the Communication Station exhibit, curated by Lemle, children examined such artifacts as a rotary telephone; guests could also broadcast the weather and create animations on up-to-the-minute equipment.

While the initial impetus for the museum was practical, the goal was always much bigger. From the beginning, say the Lemles, the project exemplified the core values they had absorbed at Oberlin. "The challenge to me was to create not just an inspiring place, but a self-sustaining institution," Lemle says. "Social activism, an important Oberlin ideal, is all about being a social entrepreneur, to improve society in some meaningful way. Long Island had been a bedroom community and, as a result, had developed few of its own cultural and educational institutions. This was a civic contribution that we could make: an institution that would be accessible to everyone and have an important impact on Long Island and our community." He adds, "The idea that one person can change the world? I have to say that it really takes a group of people!"

Accessibility, social activism, and the uniting of different segments of the community—all were implicit in the Lemles' plans for the Long Island Children's Museum. Today, LICM has adopted a broad, inclusive stance toward its community, serving not just visitors who can afford the $9 entrance fee, but also by reaching out to guests of all backgrounds, ages, and abilities with a kaleidoscope of programs and policies. The museum is not simply a winter substitute for Little League or a place where parents and children can find entertainment on rainy days, but a means for all children to explore the world, for parents and teachers to

find resources to encourage that exploration, and for different segments of the community to meet one another.

Kohen-Lemle sees exploration as a key element of the museum's mission. "If you distilled our mission to its essence, it would be, 'Let's get excited about our world.' That's an Oberlin value to me—step out of your bubble, meet other people, share experiences, incubate ideas—and do so in a beautiful way."

Suzanne LeBlanc, who joined LICM as executive director in 2005, points out that children's museums, historically, have been important community institutions since the days of World War I, when the Boston Children's Museum, although struggling financially, decided to remain open because it was one of the few places in the community that had heat. "There's a big movement in museums to be accessible and multilingual, and children's museums, which often have the community as part of their mission, have led the way," LeBlanc says.

The germ of the larger institution was implicit in LICM's earliest years, but the start-up work (which became a full-time job for the three women in the original group, all at home with their children at the time) was done by the six founders. That group, which included two lawyers (Lemle was general counsel of Cablevision Systems Corporation at the time), a writer, an artist, a teacher, and a musician (Kohen-Lemle), found that the project called upon all their skills. Aided by a part-time consultant, they developed a strategic plan and decided that by creating a small museum first, they would learn by doing. "Many institutions begin by hiring a consultant to conduct a feasibility study; we built our feasibility study," Lemle says.

The jobs included forming a 501(c)(3) corporation, getting a provisional charter from the state Board of Regents, raising $500,000, and finding rent-free space—5,400 square feet in an office building. Two of the founders attended a workshop on museum start-ups. The families took their children on exploratory trips to other museums (the Lemles' daughter and son, 3 and 6 at the time, were "secret shoppers") to examine models for exhibits and the museum as a whole. "From the beginning, we envisioned the museum as very interdisciplinary, creative, and housed in a vibrant space," Kohen-Lemle says. Adds Lemle, "We also wanted it to reflect social issues."

Lemle remembers vividly the museum's opening day in 1993, the weekend before Thanksgiving. "There was a line of people at the door that stretched along the first floor corridor, through the lobby, down the stairs, and out to the street," he says. "We were thrilled—and terrified. I went home that day and wrote a timed-ticket policy. We had days in our first year when the museum opened at 10 a.m. and all the tickets for the day were sold out by 10:15. We had to turn away literally thousands of visitors."

Plans to staff the museum entirely with volunteers were quickly reconsidered. A project director, who would become the museum's first executive director, was hired within two weeks. Because the building could accommodate just 98 people, LICM's first newsletter ran side-by-side headlines: "Museum Opens!" and "Board Begins Search for Larger Quarters." Projections of 25,000 visitors that first year morphed into 75,000 actual guests.

In 2002, with a 60-year rent-free lease from Nassau County and a capital campaign that raised over $17 million to convert a derelict airplane hanger into a two-story museum, those "larger quarters" became a 40,000-square-foot reality. LICM now attracts some 265,000 visitors a year to its 15 interactive exhibits (14 ongoing, one rotating), workshops, theater performances, and cultural events that reflect art, science, music, technology, social issues, the natural world, and more.

With its expanded capacity, LICM put its commitment to community access into full gear. The KICKstart program, now in its sixth year, targets children and families from four of Long Island's neediest school districts. All preschoolers enrolled in a Head Start program and second- and third-graders make several field trips each year to the museum for customized activities. Teacher training and outreach to summer camps are offered. Special programs to promote family involvement are central to the program, with events for KICKstart families opening and closing the school year. Additionally, each family receives a free museum membership. So far, nearly 15,000 children have participated.

"The Long Island Children's Museum trips are very different from other museum trips because the children actually take ownership of their learning," says a third-grade teacher from Central Islip. "They go to the different stations and interact with the materials, and they become so excited because they are not afraid to touch things, not afraid to explore. And we know that one of the major ways that children learn is through exploration."

LICM also provides services atypical for a museum, such as a kindergarten readiness program for the nearby Uniondale school district, which has a fast-growing population of immigrant Latino families with limited English proficiency. Launched in 2006, "Juntos al Kinder/Together to Kindergarten" invites small groups of children to the museum every summer for a month of daily classroom activities. "We model kindergarten for children who have not been to preschool," LeBlanc says. Weekly workshops for parents offered in Spanish acclimate them to the culture and expectations of a U.S. classroom, enabling them to be advocates for their children.

The latest community project, "Be Together, Learn Together," funded by a $150,000 federal grant from the Institute of Museum and Library Services, is still in the planning phase. The museum is collaborating with the Nassau County Department of Health and Human Services and Family Court in serving foster and adoptive families, families who are required to have supervised visits, and others aided by these partnering organizations.

"The county wants to change the dynamic of how people are served in social services buildings, and it approached us about doing something with families," LeBlanc says. Museum involvement may include such offerings as parenting workshops, museum memberships for foster and adoptive families, providing outreaches at the county's welcome center, and creating a more inviting visitation room at the center. Once the parameters are decided, LICM will apply for a full implementation grant. "It will be quite a big initiative," LeBlanc adds.

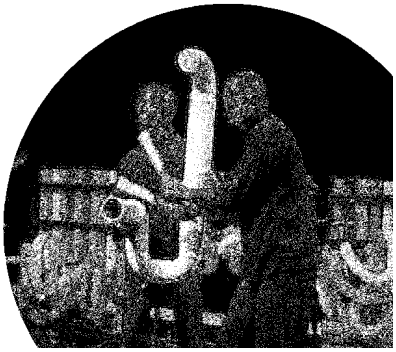
The museum is also intent on making a better world through its ecological focus. A new outdoor exhibit, Our Backyard, is all about "ecology, gardening, and animals, and how everything is interconnected," says Hillary Olson, LICM's director of education. "Kids make a salad from the garden and eat it. Parents are stunned when the kids eat a radish! We have a composting project – the kids make their own composters in bottles and take them home with their own worms."

"Social activism, an important Oberlin ideal, is all about being a social entrepreneur, to improve society in some meaningful way." —Robert Lemle

Such outdoor exhibits are expected to be the fastest-growing children's museum feature, says Lemle, who now has his eye on the unused airplane hanger next door, which LICM hopes to convert into an all-outdoor exhibition space. The $15 million expansion would be a very different process from that first start-up so many years ago, when the founding board of trustees did everything themselves. The Lemles acknowledge that managing the museum's transition into a mature institution – in which the board sets policy and does fundraising and leaves day-to-day operations to the staff – has been a challenge. "The museum was like our third child," Kohen-Lemle says. "Now it's an adolescent, and it's time to let it spread its wings."

With their own children now in college and applying to graduate school, the couple marvels a bit at the impact of that now two-decade-old bright idea. "At our 10th anniversary event five years ago, an 11-year-old boy said to me, 'I've been coming here my whole life,'" says Lemle, who can't help thinking about how amazing it will be to visit the museum with his own future grandchildren, remembering how he and his wife helped bring it into being. ❀

Heidi Waleson, *a New-York based writer, is the opera critic for the* Wall Street Journal.



Letter of Support
- Health and Human Services

THOMAS R. SUOZZI
COUNTY EXECUTIVE

MARY R. CURTIS, PH.D.
DEPUTY COUNTY EXECUTIVE

Health & Human Services
60 Charles Lindbergh Boulevard
Uniondale, NY 11553
(516) 227-7900
FAX (516) 227-8433

To Whom It May Concern:

Nassau County Health & Human Services enthusiastically supports a partnership with the Long Island Children's Museum to assist our County's most vulnerable young children and families – those who are being served by CPS, Preventive, Foster Care, and Adoption Services.

The proposed "Be Together, Learn Together" programs build on the relationship among the Museum, Family Court, and Nassau's Health and Human Services Vertical (which is comprised of the Department of Social Services; Health; Mental Health, Chemical Dependency and Developmental Disabilities; Youth Board; Senior Citizens Affairs; Veterans Affairs; and Office of the Physically Challenged). The linkage between the Museum and Health & Human Services was facilitated when a new state of the art HHS facility opened in a location across the road from the Museum. Shortly after the move, HHS administrators approached Suzanne LeBlanc, the new director, about creatively collaborating on behalf of the children and families using the county agencies' services. Our colleagues from the Nassau County Family Court soon joined the discussion and envisioning process.

We look forward to participating on the project's planning committee. We will contribute our knowledge of the challenges faced by our clients, and our ideas about how these challenges can be mitigated through the "Be Together, Learn Together" programs. We welcome the opportunity to enhance our services through collaboration with the Long Island Children's Museum and look forward to initiating and implementing "Be Together, Learn Together".

Very truly yours,

Louise Skolnik

Louise Skolnik, DSW
Director, Health & Human Services

Cc: Mary Curtis, Ph.D.
Deputy County Executive

The Slender Golden Thread, 100 Years Strong

The children's museum movement celebrates its centenary

By Suzanne LeBlanc

[A] slender, golden thread connects a number of children's museums throughout the breadth of our land. If temporarily slender, while the public awakens to the challenge for the material upbuilding and stabilization of these museums, it will eventually strengthen. In every large city a potential pioneer group is ready to follow new leadership for planting this idea in their midst.—Anna Billings Gallup, former curator-in-chief, Brooklyn Children's Museum, in The Children's Museum News, December 1939-January 1940

This December, as the children's museum field celebrates its 100th anniversary, a look across the landscape reveals that Anna Billings Gallup's dream has been realized: approximately 400 children's museums throughout the world have strengthened that "slender golden thread." A professional organization, the Association of Youth Museums (AYM), with paid staff and an office in Washington, D.C., serves the youth museum field, as does a European network, Hands On! Europe—Association of Children's Museums. In addition, many science, natural history, art, and history museums have created discovery rooms, children's classes, and areas of more active exploration for younger children. Interactive exhibition techniques and a stronger emphasis on education—introduced to the field by youth-oriented institutions—are now common in all types of museums.

As they begin their second century, children's museums are reflecting on their past, assessing their present, and looking toward their future. At AYM's 1995 annual meeting, children's museum leaders discussed the future of the youth museum field. Detailing those conversations in "The Changing Paradigm," a 1995 article for AYM's journal *Hand to Hand*, was Elaine Heumann Gurian, former assistant director, the Children's Museum, Boston. She wrote: "The single most significant characteristic of children's museums is that they have always been audience-centered. At this point, what does our audience need from its institutions? Looking back at the history of children's museums—and they are nearly one hundred years old—one can see that they have reinvented themselves many times."

Over the past 100 years, children's museums have undergone changes in content focus, exhibition style, program offerings, and age concentration. As institutions connected to their times, children's museums have been influenced by changing views of childhood, educational theory, societal issues, and family patterns. However, their core, guiding philosophy remains the same. In the words of Anna Billings Gallup, reprinted in the 1908 *Proceedings of the American Association of Museums*, "To inspire children with this love for and pride in the institution, they must feel that it was created, and now exists for them, and that in all of its plans, it puts the child first."

Suzanne LeBlanc is executive director, Lied Discovery Children's Museum, Las Vegas, Nev.

The Pioneer: The Brooklyn Children's Museum

The U.S. children's museum movement began with the Brooklyn Children's Museum (BCM), which opened its doors in 1899. BCM was an offshoot of the Brooklyn Institute of Arts and Sciences (BIAS), a predecessor of what would become the Brooklyn Museum of Art. Its mission was to stimulate and satisfy children's natural curiosity. BCM's founders originally planned that collection objects considered not quite up to the Brooklyn Museum's standards would be given to the children's museum. But that idea was quickly abandoned, and staff arranged to buy scientific models of insects, reptiles, and plants from Parisian model-maker Emile Devrolle. The Brooklyn Children's Museum opened on Dec. 16, 1899. It was an immediate success, welcoming 807 visitors in the last two weeks of 1899.

BCM's popularity continued to grow through the years largely due to the efforts of Anna Billings Gallup, who became one of the American Association of Museum's founders in 1906. Gallup pioneered an innovative series of child-oriented programs, including collecting field trips, special-interest clubs, hands-on examination of collection objects, programs for various age groups, and a flexible exhibition style. Under her leadership, BCM's staff, who had lost sight of the museum's original focus on the child in favor of services to teachers, were re-invigorated.

Gallup believed ardently in the importance of children's museums and museum education, and her ideas resonated with audiences in the United States and abroad. She assisted in the formation of new children's museums whenever and wherever she could, constantly pushing herself and the profession forward. In a Feb. 25, 1928, article in the *Brooklyn Daily Eagle*, she wrote, "The process of gaining a higher and better concept of Children's Museum service has been a joyous evolution. As the vision of this glorious opportunity to give children wholesome, active ideas becomes clearer to the public mind, it will gain a finer and better expression."

The Early Years: 1900-1930

"The Children's Museum idea is Brooklyn's gift to the world."—Anna Billings Gallup, in the Brooklyn Daily Eagle, Feb. 25, 1928. As the next handful of children's museums opened—in the Hague, Netherlands in 1904, in Boston in 1913, in Detroit in 1917, in Indianapolis in 1925, and in Duluth, Minn., in 1930—the Brooklyn Children's Museum was seen as a model and Gallup as an inspiration. In 1924, Indianapolis resident Mary Stewart Carey visited BCM and left Brooklyn determined to create a similar institution for the children of her hometown. Archival records detailing the history and development of the Duluth Children's Museum refer to Gallup as an "inspiration . . . in the founding of the Duluth Children's Museum, and she remained a staunch friend of the Duluth Museum until her death." And at a meeting prior to the opening of Children's Museum in Boston, Gallup was the main speaker, describing the work of the Brooklyn Children's Museum and offering advice and support.

The Children's Museum in Boston was founded by members of a Science Teachers' Bureau, which had been formed in 1909 "for the exchange of ideas and material among teach-

The Past Reveals the Future: 100 Years at the Brooklyn Children's Museum

OF CHILDREN'S MUSEUMS

ers of science." Once the decision was made to exchange natural science specimens and other material, finding a physical location and developing a teaching collection were the natural next steps. The bureau then decided to open a room to house the collection, as well as books, charts, and lantern slides, and members soon proposed the formation of a children's museum. They were supported in this effort by the Women's Education Association, whose members were early and long-term supporters and donors of the children's museum.

In 1915, the Children's Museum in Boston opened with two display cases—one contained birds and the other, minerals and shells. To develop the museum, Curator Delia J. Griffin enlisted the support of local children, who identified and marked nature walks, published a magazine, took photographs, prepared specimens, built homemade science equipment, and made clay and wax models for exhibits. Early collections were formed from natural history specimens obtained from the Society of Natural History, the University Museum at Harvard, and the Peabody Museum of Salem. And the Women's Education Association donated artifacts from Japan and the Philippines. In the museum's second year, more than 10,000 children visited on field trips.

Ten years later, in Indianapolis, civic leader Mary Stewart Carey presented her observations of the Brooklyn Children's Museum to the Indianapolis Progressive Association, the Women's Rotary, and other interested members of the general public. Largely due to her efforts, in April 1925 the Children's Museum Association of Indianapolis was formed. The following month the museum joined the American Association of Museums, and in June a board of trustees was elected. Its members represented the city's wealthy elite and cultural and educational communities.

The week of Dec. 7, 1926, was designated Museum Week in Indianapolis. A letter sent out by the museum's board explained that it was a week of "organized efforts to secure material and equipment, so that we may open our museum formally about January 1." Teachers read to their students a letter from Carey that discussed the proposed museum and

any two but the aesthetic, intellectual, and social development of children through the use of museum collections and exhibits, and through opportunities for self expression thereby, are considered the cornerstone of all children's museum work."

Now What? The '60s Revolution

But by the 1960s, children's museums were ready for a change. Museum leaders, while maintaining the traditional focus on the child, began to seek exciting new ways of reaching their young visitors. In 1963, Michael Spock became the director of the Children's Museum in Boston. Though he'd had grand discussions with the search committee about what he wanted to accomplish, he had no definite plan. He describes going into his office, asking his secretary for a few things, looking in all the drawers, and then asking himself, "Now what?" Searching for something other than traditional exhibit-case displays, Spock happened upon an article in *The Museologist* that described a small exhibit that illustrated the insides of 10 or 20 different items. "It sounded wonderful to me, so we used the idea and greatly elaborated on it," he says.

The result was an exhibit that opened in 1964. Called "What's Inside?," it contained life-sized cross-sections of all kinds of things kids (and adults, too) might wonder about: a baseball, a toilet, a toaster, 8-mm film loops, fresh gladiolas, and a crawl-in manhole. The "What's Inside" experiment led the Children's Museum in Boston down new and exciting paths. "That exhibit was just wildly successful," says Spock. "It fully changed our thinking and I think everybody else's. From that point on we got bolder about trying things. We got smart fast."

In 1969, about five years after Michael Spock began experimenting with interactive exhibits in Boston, physicist and educator Frank Oppenheimer created and opened the Exploratorium, a new type of science museum, in San Francisco. The Exploratorium, with exhibits that examined scientific phenomena, was influential in the development of science exhibits in children's museums. Visitors were given hands-on access and guided in open-ended exploration.

In the late 1960s and early '70s, staff at children's museums were adherents of Swiss psychologist Jean Piaget's child development theories, which stressed the importance of the active mind in interpreting the sensations of the environment, and by the Open Education Movement. Patricia Steuert, who is currently executive director, New England Quilt Museum, Lowell, Mass., is the former deputy director of the Children's Museum in Boston; she arrived there in 1968. Steuert remembers that at the time Boston's public and private schools were influenced by the teaching techniques used in Britain's infant schools, which taught children from kindergarten to the third grade. Steuert and other staff members visited these schools to observe and study their philosophy and practice. Says Michael Spock: "If we didn't do it, some [other museum] would have; it was in the wind."

At the same time, educational psychologist Jerome Bruner's research at Harvard University had led to the creation of Head Start—publicly funded preschools for children from low-income families. Bruner's research also informed parents from middle class and wealthy backgrounds that very young children benefited greatly from stimulating experiences and environments. As a result, parents began taking their youngsters to children's museums in increasing numbers, leading to a drop in the average age of visitors to these institutions. Many children's museums responded by creating special exhibit environments for very young children and new institutions were created with the younger child in mind.

This focus on young children represented a change in approach. Early children's museums often served teenagers in specialized clubs and workshops. And as recently as the 1960s, the Brooklyn Children's Museum offered rigorous, pre-collegiate programs in anthropology and science for motivated high school students. Today, few children's museums present exhibits and programs that target high school kids, though many of them do hire teenagers—in volunteer and paid positions—as docents and interns.

Rapid Expansion: The 1970s and 1980s

Spurred by the excitement generated by the changes at the Children's Museum in Boston and the Exploratorium, more than 50 children's museums opened in the 1970s and 1980s. These include many well-known children's museums that have expanded and moved to new and/or larger quarters, such as the Please Touch Museum (1976), Minnesota Children's Museum (1981), Chicago Children's Museum (1982), and Children's Museum of Houston (1985). Long-time children's museum professionals offer a number of reasons for this growth spurt, including critical mass, media attention, changing family patterns, parents' search for activities for very young children, and the existence of good models to emulate.

Throughout the history of children's museums, civic leaders who saw them in other communities wanted them in their own. In addition, as the years passed, the press began to increase their coverage of children's museums. Soon the public began to see that children's museums could help their communities. As Ann Lewin-Benham explains in "Children's Museums—A Structure for Family Learning," an article reprinted in *Bridges to Understanding Children's Museums*, "Working mothers, house fathers, single parents, older parents, [and] geographical separation of the generations all gave impetus to the creation of children's museums. The establishment of a children's museum was a good vehicle to absorb energy, provide direction, and foster feelings of belonging to something worthwhile and larger than oneself and to a community of people with like interests."

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The 1970s also saw dramatic developments at the Children's Museum of Indianapolis, which expanded its space to accommodate a growing number of visitors. In 1974, nearly 184,000 people visited the Children's Museum of Indianapolis, and the museum was forced to turn down requests from more than 300 school groups. There wasn't enough space to accommodate all the people who wanted to visit. Then-director Mildred Compton set her sights on the problem, announcing at the museum's annual meeting in February 1972: "The Children's Museum is drowning in its own success." In 1976, assisted by a large gift from the Lilly Endowment, the institution expanded to 225,000 square feet and became the world's largest children's museum.

The 21st Century: Port Discovery and Beyond

At the start of a new millennium, children's museums are looking to reinvent themselves once more. Like other kinds of museums, some are adapting approaches used by the entertainment industry to encourage their audiences to return again and again. No institution exemplifies this new approach more than Port Discovery: The Children's Museum in Baltimore, which opened on Dec. 28, 1998. The museum was a collaborative effort, designed by exhibit specialists at Walt Disney Imagineering and a team of museum educators that included Michael Spock.

Kelly Dwyer Southern, the museum's president and CEO, says that Port Discovery's founders wanted to build a place where kids could "discover and pursue their dreams and aspirations." Skill development, problem solving, risk-taking, and team building are taught to the museum's young visitors as a way of helping them achieve their goals. Spock describes Port Discovery as the next step in the client-centered focus of children's museums. "The kid is now the content," he says.

The approach seems to be attracting visitors: Port Discovery has welcomed more than 325,000 people since its opening day. The 80,000-square-foot institution also shows that local government officials view all types of museums as crucial to their cities' financial well-being. According to Southern, the project had the strong support of Baltimore's mayor, who viewed it as an important economic development tool in the revitalization of the city's downtown Inner Harbor area.

Influence on the Museum Field

It is difficult to accurately measure the influence of children's museums on the broader field. But it seems evident that, over time, museums of all types have started to utilize more interactive exhibition techniques and place more emphasis on education and families—approaches that were pioneered by children's museums. In the same way, children's museums have been influenced by other museums, particularly in exhibit design and the development of standards and ethics. Over the years, there has been constant give-and-take in both directions. Bonnie Pitman, executive director of the Bay Area Discovery Museum, a children's museum in Sausalito, Calif., has spent the majority of her professional life in art museums. She identifies three areas in which children's museums have had an extraordinary impact on the museum field—exhibition, family learning, and staff training.

Experimentation with interactive exhibition techniques, introduced by Michael Spock at the Children's Museum in Boston and Frank Oppenheimer at the Exploratorium in San Francisco in the 1960s, was met with a dramatic response, both positive and negative, from museum professionals. Spock describes the reaction from other museums when the Children's Museum in Boston opened the experimental Visitor Center to the public in 1969: "It took their breath away. They wanted to know what it was all about." Gurian recalls that there was much discussion in the museum field at that time about whether the Boston children's museum and the Exploratorium could be called museums. But the experiments in Boston and San Francisco also generated an excitement that began to change the way museums viewed their role and their audience. Certainly, the rapid growth of children's museums in the 1970s and 1980s stems in large part from the success of these two institutions.

Many children's museum professionals interviewed for this article receive countless requests for assistance—advice on how to program for family audiences, for example—from staff at other types of institutions. Barbara Meyerson, executive director, of the Arizona Museum for Youth, says that she receives as many requests for help from art museums as from children's museums. Spock believes that the influence of children's museums on the field was especially strong in the

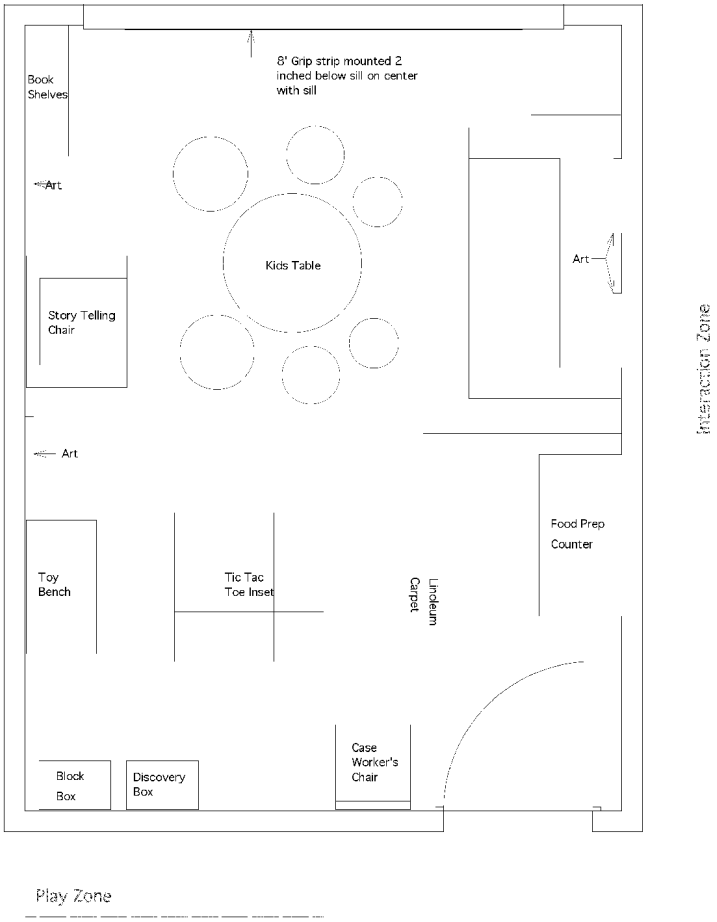
(Please turn to "Thread," page 63)

1970s and 1980s as more and more traditional museums were exposed to the transformation happening in youth-oriented institutions.

In 1996, respondents to a survey for the Children's Museums: Bridges to the Future research project listed the following as important to the future role of children's museums: do research and experimentation that informs the field (21 percent); introduce the museum experience to future audiences (20 percent); provide and experiment with family learning and intergenerational models (16 percent); continue to develop interactive, participatory exhibitions and programs (16 percent); be an advocate and a model for educational innovation (11 percent); and strengthen community (including accessibility to the underserved (10 percent). Ten percent of the respondents stated that the future is uncertain because of the perception that all museums are doing more to serve children's museums' target audience.

What is unique now about children's museums and what is their future? "Children's museums speak to a deep desire to be anchored in a community and to see your children anchored in a community," says Sally Osberg, executive director of the Children's Museum of San Jose. The Bay Area Discovery Museum's Pitman sees that as a crucial question to answer. "Children's museums are entering a field of unknowns and have a more complicated road ahead," she says. Paul Richard, executive vice president, Children's Museum of Indianapolis, says that the challenge "encourages us to do more experimentation to push the envelope."

Perhaps the answer lies in the following quote by Elaine Heumann Gurian in *A Draft History of Children's Museums*: "So what's next? It is believed that many different streams will emerge and children's museums will no longer be replicas of each other. True to their original mission, children's museums will again refer to local need and determine what is not now (or no longer) provided by any other community institutions. They will once again reinvent themselves."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Book Shelves
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Kids Table
Story Telling Chair
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Food Prep Counter
Toy Bench
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Block Box
Discovery Box
Interaction Zone
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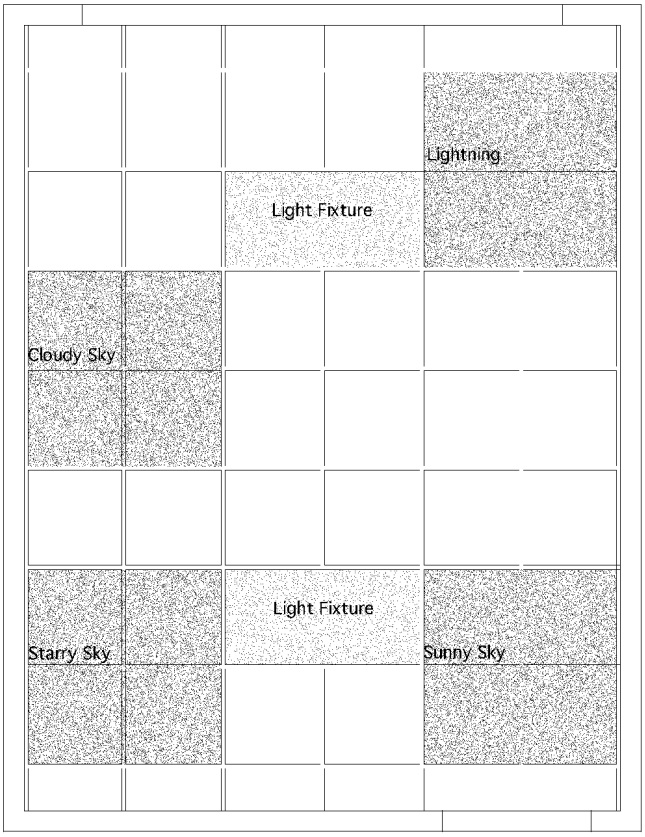
Lightning
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Cloudy Sky
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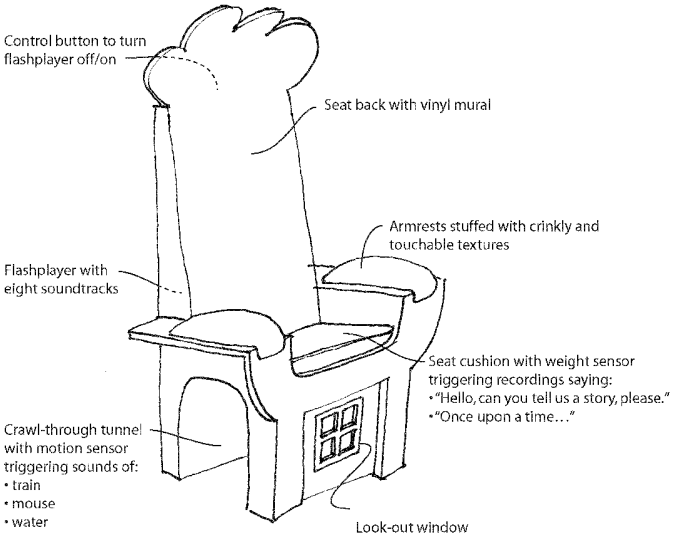
Starry Sky
Sunny Sky

Play Zone

THE BIG CHAIR
Story telling chair for Supervised Visitation Room



Kick Start

Long Island Children's Museum

Background

KICKstart (Kids Ideas Create Knowledge) is a groundbreaking learning initiative, launched in 2002, to strengthen the Museum's programming for low-income children and families. KICKstart provides large scale, year round programming for all Head Start, second and third graders in four communities on Long Island (Hempstead, Roosevelt, Wyandanch, Central Islip) that are most in need of educational enrichment programs. Compared with State averages, these four school districts have a significantly higher percentage of students eligible for the free lunch program—as high as 84% in one district.

Program objectives

- Increase family and parental involvement in children's learning, and
- Increase hands-on, inquiry-based exploratory learning opportunities,
- Increase access to Long Island Children's Museum (LICM) for families traditionally underserved by cultural institutions.

Program components

- Multiple visits for each student to LICM
- Participation in specially designed staff-led curriculum based programs
- Family Night and Summer Camp outreach activities in community centers and schools for students, teachers, parents and family members
- Community Night programming at LICM
- Professional development training for teachers
- Free family museum memberships and free bus transportation for all programs
- Bilingual curriculum materials and museum staff available

Results

- To date, 14,910 children and families have been served through KICKstart, with 42, 219 museum visits to date. In one year, 2,772 children participate.
- Teachers reported that their interest and knowledge in inquiry learning and pedagogy increased due to their involvement in KICKstart.

• Parents expressed that the opportunities for creative expression that family event activities provided greatly added to their family learning experiences.
• Pre-and post-program student drawings indicated a general increase in understanding of program vocabulary and concepts over a school year.
• In addition to being a valuable piece of their curriculum, teachers felt strongly that the program was valuable in providing a "window" onto the world outside of students' neighborhoods and the stresses of their everyday lives.
• Parents, who in the first year of the program, indicated that they had never been to LICM or simply didn't go to museums, had by the fourth year become very aware of LICM and visited it outside of KICKstart events utilizing their sponsored family memberships.

Be Together, Learn Together: A Partnership of the Long Island Children's Museum, the Nassau County Department of Health and Human Services and Nassau County Family Court

1. Project Design

Introduction

The Long Island Children's Museum (LICM) in Nassau County, NY, is requesting $150,000 from the IMLS Museums for America program to plan, research, prototype and evaluate the initial implementation phase of a new program designed to support children and families served by Nassau County social service agencies. The program, called Be Together, Learn Together, is being developed in partnership with the Nassau County Department of Health and Human Services (DHHS), Nassau County Family Court, and a National Advisory Committee including a child psychologist and children's museum peers who have developed related programs in their communities. Following this 2-year planning phase, the Museum will fully implement the new program with its partners. Be Together, Learn Together will strengthen the ability of the Museum to serve as a center of community engagement through new partnerships designed to respond directly to the needs of a specific group of families. Because of the time required for substantial partnership development, the need to create and utilize a National Advisory Committee, and the necessity of assessing and monitoring program impact, this proposal requests support for an in-depth planning and prototyping phase.

The intended goals of the collaboration between LICM, DHHS and Family Court are 1) to develop a substantial and sustainable partnership between the organizations which enables each to meet key goals and/or aspects of their strategic plans, 2) to positively impact the experience of client families by improving the delivery method and quality of the County's preventative and supportive services, and 3) to introduce and establish the Museum as a new, accessible resource to those families who might not otherwise utilize its programs and exhibitions. This proposal requests funding for the first stage of the project: developing the structure of the partnership, and planning and testing the collaborative programs. Following the successful completion of this stage, the partner organizations will be prepared to fully implement the program, conduct additional evaluation and develop a plan for the program's joint sustainability. The creation of Be Together, Learn Together is an important opportunity for LICM to continue to fulfill its strategic goal of "* * * expanding the reach of its mission by deepening the connection with Long Island's communities and increasing the size and diversity of its audience."

The Partnership

In September 2005 Nassau County opened a new, 219,000 sq.-ft. Health and Human Services Welcoming Center less than a 10-minute walk from LICM. The new facility houses eight agencies—previously located in five different sites throughout the County—under one roof. For its 1,000 visitors each day, the building is bright, positive, and welcoming and includes a children's playroom and a library where books are given away. Most importantly, the new Center now provides a "single point of entry into the Health and Human Services system" for individuals and families in Nassau County. This initiative to consolidate the intake process, increase the efficient delivery of services and ensure an "outcome-driven approach to case management" was christened the No Wrong Door program. No matter where a client enters the human services system, that person will now have access to any other County or community service needed.

Shortly after the move, Louise Skolnik, Director of Human Services, key DHHS department heads and Judge Hope Zimmerman (Family Court) approached the Museum. The group discussed ways in which they could work together to support families at the new Welcoming Center as well as those families engaged with Child Pro-

tective Services (CPS), Preventative, Foster Care & Adoption Services and Family Court programs. All agreed that a partnership between the three entities could 1) better address the specific needs of these families, 2) take advantage of the close physical proximity between DHHS and LICM, 3) utilize the Museum's expertise in providing high-quality educational experiences for families, and 4) capitalize on the momentum and success of No Wrong Door.

Child Protective Services—CPS works collaboratively with the Family Court and Foster Care programs and is composed of several units overseeing cases which involve court-ordered supervision, sexual abuse investigation, foster care plans, court petitions, and night/emergency response. In 2005, of the 5,450 reports received, 1,564 (29%) of the total reports alleging child abuse or neglect were substantiated, higher than the national average of 25.7%.[1] Maureen McLoughlin, Director of Child Protective Services, describes the challenges she faces with parents, saying, "this client population can't go to the usual mothers' groups because they don't have transportation and feel intimidated by their poverty and lack of education, employment or social skills. We must find ways to help rehabilitate them so they can care for their children." Among other ideas, McLoughlin is interested in creating a supervised visitation program at the Museum. Instead of the "two-way mirror in a sterile office," McLoughlin feels the Museum will offer a "new world" to parents where they can gather information through observation, forge new relationships with other parents and learn to play with their children.

Preventative, Foster Care & Adoption Services—In Nassau County, there are 450 children currently in foster care. (In addition, there are approximately 400 other children who are admitted or discharged from the system each year.) Compared with national statistics, these youth spend an average of a year longer in foster care situations, with 51% living in non-relative foster homes. Similar to national case goals, 54% of the cases are intended to result in the return of the child to the parent or guardian. Nassau County has almost twice the number of African-American children and substantially fewer Caucasian and Hispanic youths than national levels.[2] Critical challenges are recruiting and maintaining an adequate number of foster/adoptive parents, locating the needed preventative or rehabilitative services and motivating the parents and children to engage with and benefit from them. Joseph Malewicz, Director of Services to Children, recognizes the potential of this project to yield preventative programs, support foster care children and families, and heighten awareness of the need for foster/adoptive parents.

Family Court—Judge Hope Zimmerman presides over the Family Treatment Court program which supports and monitors parents recovering from drug addiction and working toward regaining custody of their children. She recently traveled to the Providence Children's Museum (RI) to learn more about their program for court-separated families, and has been an enthusiastic advocate for developing similar community-based collaborations in Nassau County. Zimmerman believes that in its capacity as a parent education program, this project can positively impact the recovery experience for many of the parents she sees who are suffering from the fact that they were not "parented" as children and now lack parenting skills. Although they are highly motivated to get their children back, they lack the "inner resources" to understand parenting as a "job" which requires specific skills. "I'd like to get to the young mothers and break this cycle—help them to discover their own resources. They want to be good parents." Echoing McLoughlin, Judge Zimmerman wants parents to learn how to play with their children, and through that process, to be better able to understand and care for them.

LICM—The Museum provides a range of specialized programs for children and families. Early childhood programs include a 1,700-sq.-ft. exhibition (TotSpot) and family resource room, daily parent/child workshops in music and movement, stories and art, "messy afternoons," and parenting workshops such as "Parenting the Strong-Willed Child," led by the Museum's Early Childhood Program Manager and a child psychologist. Additionally, the 2002 launch of the KICKstart program with a $3.5 million multi-year grant from a software company, has enabled the Museum to serve more than 20,000 pre-school, second and third-grade students in four, high-need school districts. The program has increased access to, and awareness of, museums and other informal learning institutions for families who are traditionally underserved by cultural institutions; increased parental involvement in children's

[1] U.S. Department of Health & Human Services, Child Maltreatment Report 2004: Of 1,860,070 investigations nationwide, 477,755 were substantiated (25.7%). [*http://www.acf.hhs.gov/programs/cb/pubs/cm04/table2—4.htm*] This is the most recent national data available, issued in July 2006.

[2] Comparison of Adoption and Foster Care Reporting and Analysis System data with NYS Summary of Characteristics of Children in Foster Care.

learning; and increased exposure to hands-on, inquiry-based, exploratory activities for children in underserved populations. These achievements parallel the desired outcomes of Be Together, Learn Together.

Joint Planning Committee & National Advisory Committee

The planning and development of Be Together, Learn Together will be accomplished by a Joint Planning Committee (JPC) and guided by the input and expertise of a National Advisory Committee (NAC). The JPC will be comprised of staff from each partner organization and representative families currently or recently having received services. The NAC will include Janice O'Donnell (Director, Providence Children's Museum), Elaine Wideman-Vaughn (Vice President, Education and Community Services, Please Touch Museum), Jeri Robinson (Vice-President of Early Childhood Programs, Boston Children's Museum), Marty Norman (Child Psychologist, Boston), Gladys Serrano (Executive Director, Hispanic Counseling Center, Nassau County), Terry Wood (Program Director, Family & Children's Association, Nassau County), and Cheryl Kessler (Evaluator & Research Associate, Institute for Learning Innovation, Annapolis, MD). The NAC will review documents outlining the progress of this research and planning phase and provide input at key points. The benefit of their collective expertise in overseeing related programs at children's museums and supporting children and families in transition, is crucial for the long-term success of this project.

Be Together, Learn Together: Preliminary Scope of Project

The purpose of this grant will be to support the research, planning, prototyping and evaluation of the initial implementation phase of Be Together, Learn Together. Senior staff at LICM, DHHS and Family Court feel this program could provide a valuable national model for other children's museums and social service agencies forging similar partnerships to serve families in their communities. There are related family visitation programs at the Providence Children's Museum and the Please Touch Museum. Because the planned scope of Be Together, Learn Together will encompass family visitation as well as several other kinds of programs to address related familial issues, project partners feel a successful planning phase can yield a new model.

Although the JPC will develop the final package of programs for Be Together, Learn Together, the initial meetings between LICM, DHHS and Family Court staff resulted in the identification of target audience groups and preliminary programs ideas. There are three major family audience groups to be served by Be Together, Learn Together : 1) Parents in Family Court (parents whose children are either at risk of or have already temporarily been placed in foster care, or parents who are trying to regain custody), 2) Foster Care Families (families who have foster children placed in their care), and 3) Families utilizing the new Health and Human Services Welcoming Center for any number of other reasons. (Specialized units within Child Protective Services interface with audience groups 1) and 2) described above.) Programs for these audiences will most likely occur at Family Court, at the Center and at LICM. To support the partnership itself and to provide concrete information about proposed programs during the development process, programs will be prototyped during years one and two of this planning phase.

Potential programs could address some of the general needs of these audiences as well as specialized needs, including: a.) parent workshops focusing on childhood development, the importance of play, and supporting pre- and early literacy skills, b.) supervised family visits at LICM which utilize the Museum's exhibitions and general program offerings as a positive learning environment, c.) workshops designed for children and parents together which incorporate activities that allow modeling of parenting skills by staff, d.) seminars for foster parents about how to support foster children's learning (addressing both social and academic aspects) and how to build confidence and comfort levels for children joining a foster care family; e.) a special Museum membership program for families with foster children; f.) facilitated round-table discussions for parents in Family Court; g.) memberships to LICM for newly reunited families, and h.) awareness days/events at LICM designed to increase public understanding of the need for more families willing and able to take foster children into their care. In addition to these kinds of programs, LICM exhibition staff will design and install cheerful interior design enhancements for the DHHS Welcoming Center and the Family Court day care center.

Project Oversight

Suzanne LeBlanc is the Executive Director of LICM and Project Director for Be Together, Learn Together. She will be ultimately responsible for managing the overall partnership with participating staff from LICM, DHHS and Family Court and the planning, prototyping and evaluation of the project. To enable effective project

management, several key review points have been built into the action plan outlined above. LeBlanc will direct members of the Joint Planning Committee to anticipate and consider potential challenges for the process and to discuss these with the group throughout the project. She has already identified three possible challenges: 1) because social service systems and their employees tend to be overworked and emotionally stressed, the prospect of changing existing systems of service delivery might seem overwhelming, 2) moving the project from a vision to a reality will require significant buy-in on all levels for each partner, and 3) clients receiving social services, whether mandated or voluntarily, tend to see it as an indication of their failure and/or something about which they have no choice. LeBlanc's experiences developing a program for parents of Head Start children at the Lied Discovery Children's Museum in Las Vegas, and one at the Brooklyn Children's Museum for families living in transitional housing, will assist her in counteracting some of these challenges. Additionally, she will direct the JPC to design a general training session for staff at partner organizations not directly involved in the planning of this project, which could both identify points of resistance and emphasize organizational benefits. Also, families who are either currently receiving, or have recently received services through one of the project partners will participate on the JPC to provide feedback about how to address negative stigmas and make this new resource one that parents and families will want to take advantage of. Throughout the project, any major issue requiring a change in direction or tactic will be acted on accordingly. The completion of front-end and formative evaluation by the Institute for Learning Innovation will also uncover potential barriers to a successful outcome.

Evaluation

To insure that programs are developed to effectively serve and meet the specific needs of intended audiences, the Museum will contract with the Institute for Learning Innovation (ILI) to perform the evaluation for this project. ILI will design and conduct both front-end and formative evaluations. A major goal will be to provide information to the JPC about how programs should be prototyped so that meaningful data can be collected. In turn, resulting evaluation reports will inform the project's development process. ILI is currently engaged in conducting summative evaluation and research for the Museum's KICKstart program, focusing on program impacts on children, their families, and teachers. [See attached evaluation proposal from Institute for Learning Innovation.]

2. Grant Program Goals

The planning and initial implementation of Be Together, Learn Together directly addresses the MFA goal of museums serving as centers of community engagement because it will actively engage the Museum with both judicial and social service agencies to create needed programming for families in their shared community. The specific and complex needs of these families have prompted a collaboration between three entities that can bring their distinct areas of expertise to bear on the development of these programs. Further, through this project, LICM has identified a meaningful way to realize a high priority of its Strategic Plan, namely, to "offer inspiring, multi-disciplinary and socially relevant exhibits and programs to serve as catalysts for individual and community learning and action," along with its related goal of developing "innovative program models and partnerships that serve as benchmarks for effective community engagement."

3. How the Project Fits into Strategic Plan and Mission

Be Together, Learn Together supports the mission of LICM to be a "* * * learning laboratory that inspires children and adults through interdisciplinary, hands-on, fun experiences." This project will advance the core of the mission by developing new and meaningful ways to address the needs of one of the most underserved segments of the Museum community's audience—namely, families being monitored in Family Court and/or receiving services through DHHS. Further, LICM will continue to achieve its mission of being a learning laboratory, as it believes this program can enable these parents to discover and support their children's unique learning processes. One example of how this is taking place may be found in a recent KICKstart program offered for third graders and their parents. A mother observed how an image-making activity ignited her son's interest in a corresponding writing activity. The boy wrote more than the mother had ever seen him write unassisted. Thereafter, she used the method at home and with his teachers.

The project also directly addresses key elements of LICM's new Strategic Plan: Strategic Initiative I calls for LICM to "Offer inspiring, multi-disciplinary and socially relevant exhibits and programs to serve as catalysts for individual and community learning and action," and Initiative II looks to "Deepen our connection with Long Island and surrounding communities and increase the size and diversity of our

audience." Related goals for these Initiatives call for LICM to: 1) "Develop innovative program models and partnerships that serve as benchmarks for effective community engagement," 2) "Develop strategic community partnerships to broaden our outreach to all, especially underserved audiences," and, 3) "Develop a national reputation as a leader in the museum field."

LICM's Strategic Plan was specifically designed to effect systemic change and growth and this project advances the Strategic Plan's goals. The project also builds on LICM's recent accomplishments: 1) the opening of its 40,000 sq. ft. facility in 2002; 2) achieving and exceeding its initial attendance and programmatic goals; and 3) hiring Suzanne LeBlanc as its new Executive Director in September 2005. LICM envisions that the partnership created with Family Court and DHHS for Be Together, Learn Together will establish the Museum as a major provider of educational enrichment services to targeted families, and strengthen the Museum's relationship with the County.

With the adoption of its new Strategic Plan in 2006, LICM committed to expanding its programs expressly for underserved audiences. Staffing and operating budgets were adjusted accordingly to make programming and exhibitions for this audience a major priority. To ensure the long-term success of this project after IMLS funding ends, the Museum will have hired new staff (the Program Manager for Be Together, Learn Together) and will seek additional funding from corporate and foundation sources. Further, with the recent launch of new programs targeting underserved audiences (such as Juntos al Kinder), the Museum has gained access to several foundations on Long Island that fund social service-oriented projects. LeBlanc and the Board believe these foundations will be very interested in this new partnership and in providing financial support.

4. Strategic Plan: Process and Financial Resources

LICM's new Strategic Plan was developed upon the conclusion of a preceding plan which covered the four-year period of time following the opening of LICM's new facility in 2002. During this time, LICM was successful in meeting its initial strategic goals. Following the hiring of Suzanne LeBlanc as the new Executive Director in September 2005, and the appointment of a Planning Committee by the Board of Directors, Denise McNerney was hired as a consultant to facilitate the process of developing the new Strategic Plan. McNerney has more than 25 years of experience in strategic planning, marketing, business operations, team dynamics, and customer relations in both for-profit and not-for-profit organizations. McNerney interviewed Board members, senior staff and community stakeholders, including funders. She then facilitated a Board and staff retreat. Strategic initiatives were identified for key areas, and corresponding goals and success measures were outlined. McNerney met several times with the Planning Committee (comprised of both staff and Board members), senior staff and the full Board to create a final document. The completed plan will be presented in mid-November. At that time, implementation and reporting mechanisms to ensure effective execution of the plan will be discussed and decided.

Through the development of the Strategic Plan, the Board sought to build upon the success of the recently completed $17 million capital campaign to ensure the Museum's future—both in financial and programmatic terms. The Plan directly addresses LICM's long-term financial stability and incorporates the mechanism for its implementation through goals which outline the start of endowment and capital expansion campaigns.

5. Appropriateness of Project for Institution, Audience

As outlined in question #1, there are three specific audience groups to be served by Be Together, Learn Together. Currently, there are 450 children in foster care (and approximately 400 additional children who are admitted or discharged from the system each year), in 2005 there were 217 cases in Family Court, and 1,564 substantiated reports alleging child abuse or neglect. There are also approximately 1,000 people that enter the Welcome Center each day. These numbers provide a sense of the total size of the targeted audiences. Project partners estimate that in its first years of full implementation, the program could impact approximately 5,000 people. During this planning and prototyping phase, approximately 1,000 people would be served.

Through the development of Be Together, Learn Together, LICM is continuing its efforts to make the Museum more relevant to its community by expanding the services it offers to underserved audiences. "Underserved audiences" are identified in Initiative II of the Strategic Plan as a target audience, although taken as a whole, the needs of underserved audiences are quite diverse. One of the strengths of this program is its ability to focus on a particular segment of "underserved audiences"

through the partnership with DHHS and Family Court. These agencies have identified groups of clients who they believe can benefit from LICM's participation in this partnership and its expertise as a children's museum—namely, the ability to provide educational program in non-intimidating settings that allow for children and their caregivers to learn together.

Needs Assessment

Needs assessment reports are generated regularly within DHHS since an important aspect of their work and planning is the identification of unmet needs and barriers to service delivery. In addition to detailed quantitative information, assessment reports describe ongoing issues for clients served, including the need for: reunification of families whenever possible, as quickly as possible; rehabilitation of parents so they can care for their children; and recognition and treatment of behavioral and emotional conditions in children facing short and long-term separation from biological parents.

Another perspective was provided in a 2/12/06 Newsday article entitled "Affluent, but Needy (First Suburbs)," which noted that the problems of Nassau County—one of the most prominent of America's older, first suburbs—were beginning to draw national attention. The article states that Nassau County, and other "first suburbs," are beginning to take on characteristics of urban areas: An influx of lower-income minority and foreign-born residents means that, like cities, these first suburbs increasingly will need more state and federal aid to keep up with a growing need for social services and affordable housing. At the moment, however, they fall through the cracks in a nation where government assistance has been directed for years at urban or rural areas. As Sen. Hillary Clinton said * * * "Long Island is the victim of its own success." Nassau, as we all know, possesses major assets—proximity to New York City, extensive parkland and beaches, quality neighborhoods, a large number of highly educated residents with high income levels and a highly developed transportation network for commuting to the city. Its home values are among the highest in the nation. * * * Amid great wealth, growing pockets of poverty and communities of poorer and older residents are presenting needs that weren't an issue in earlier years, when incomes and education levels were not as dissimilar as they are today. A county built as a haven for young, middle-class families with automobiles, most of whom who could afford single-family houses, is now home to a growing population with limited access to cars, a need for cheaper housing and a greater need for social services in order to succeed as members of the community. This information, in combination with DHHS assessment data, provides a clear picture of the needs of these audience groups.

Nassau County Demographics

In 2004, there were 1,339,641 people in Nassau County. According to the 2000 census, the racial makeup of the County was 79.30% white, 10.09% African American, 0.16% Native American, 4.73% Asian, 0.03% Pacific Islander, 3.57% from other races, 2.12% from two or more races and 9.99% were Hispanic or Latino of any race. The number of non-whites in Nassau County increased to 29% in 2004, up from 21% in just four years. Between 2000 and 2003 the African American population increased from 10.7% to 11.7% and during the same period, the Latino population grew from 10% to 11.7%. As of 2004, Nassau County was the richest county per capita in the State of New York and the sixth richest in the nation, with a median household income of $78,762. In sharp contrast, the County also contains many "pockets of poverty" (as described in the Newsday article excerpt above) in communities served by and surrounding LICM and DHHS. At the time of the 2000 census, 3.50% of families and 5.20% of the population were below the poverty line, including 5.80% of those under age 18.

Program Promotion

Following this planning phase, LICM will work with project partners to promote the program to appropriate families in Nassau County. Designing a plan for program promotion will be one of the important tasks of the JPC, with input from the NAC. The high level of commitment to this project demonstrated by DHHS and Family Court will help insure that the program is promoted.

6. Project Resources: Time and Budget

The Board of LICM is fully committed to the successful completion of this project and has demonstrated this by allocating immediate and future resources. LICM's Executive Director, Suzanne LeBlanc, is undertaking this project as part of her mandate to expand the diversity of the Museum's audience and increase access to programs and exhibitions. Her duties and work plan will have significant time dedicated to this major project. Further, the Museum will hire as a new position, a full-

time Program Manager to manage this important new initiative and coordinate the activities of the JPC. Further, LeBlanc will adjust the workloads of Museum staff participating on the JPC to insure that they have sufficient time to devote to this project.

LICM is eminently qualified, both fiscally and programmatically, to complete Be Together, Learn Together as evidenced by the successful implementation of three major projects the Museum has undertaken recently: In 2002, the LICM launched KICKstart (Kids Ideas Create Knowledge), a program designed to address critical social and educational needs in four traditionally underserved Long Island communities. The program has enhanced education, strengthened community relations and resulted in more than 20,000 Museum visits from pre-school, second and third-grade students. [See attached Year 4 Evaluation Report conducted by ILI.] KICKstart is supported by a $3.5 million multi-year grant from the software company, CA. Juntos al Kinder (Together to Kindergarten) is a program the Museum instituted in 2006 to meet the needs of local families from five Nassau County school districts with limited English proficiency. The program provides daily English language immersion and school-readiness classes for children of participating families, using the rich resources and environment available at the Museum. In addition, weekly classes taught in Spanish prepare parents for the culture of the U.S. classroom. Year-round resources are also provided to participants to encourage a long-term relationship with the Museum. Finally, Moving to Grow was the $17 million capital campaign that resulted in the opening of the Museum's new facility at the Mitchel Center cultural complex. The success of these programs is due to the complete support of the Board of Directors—a level of support which is also present for Be Together, Learn Together. The Museum has a track record of sound financial management. Charity Navigator, the leading evaluator of charities in the United States has awarded LICM a four-star rating (its highest) for two of the four years the Museum has been open in its current location. The Museum possesses the resources necessary to successfully implement the proposed project, as it has a substantial budget and staff, strong earned income results and a history of successful fundraising.

The total project cost is projected at $375,928. In addition to IMLS funding requested and in-kind support, the Museum will commit significant staff time and other resources in its FY 2008 and FY 2009 operating budgets. Additionally, the Museum will solicit support from Long Island foundations such as the Rauch Foundation, the Long Island Fund for Women and Girls, the Long Island Community Foundation and United Way, among others. As is normal and appropriate for labor-intensive projects of this kind, a significant portion of the budget is devoted to staff time, benefits and consultants.

7. Project Resources: Personnel and Technology

LICM staff is highly qualified to accomplish this project. Suzanne LeBlanc is the Project Director. Before joining LICM, LeBlanc was Executive Director of the Lied Discovery Children's Museum in Las Vegas for 14 years, Assistant Director at the Brooklyn Children's Museum for 3 years, and served 15 years at the Children's Museum, Boston. She is a graduate of the Museum Management Institute in Berkeley; holds an M.A. in Counseling Psychology from Lesley College, and a B.S. in Journalism from Boston University. She has served as Vice-President of the Association of Youth Museums (now the Association of Children's Museums) and as President of the Nevada Museums Association. Many of her articles have been published in professional journals, including a history of the children's museum movement for Museum News and "Reaching The Underserved," in A New Place For Learning Science—Starting and Running a Science Center. Her experience is especially relevant to this institution, given its strategic goal of expanding the diversity of its audience.

When LeBlanc joined LICM, her first major action was to lead the process to create a new Strategic Plan. One key goal is to develop innovative programs and partnerships to facilitate effective community engagement and broaden LICM's reach and impact, especially to underserved audiences. Be Together, Learn Together is an important step toward achieving this goal. As the Project Director, LeBlanc will design a master timeline incorporating all the project's components, including the identification of key tasks & assignments. LeBlanc will insure that Museum staff on the JPC can accommodate the intensive work involved by adjusting current functions and hiring temporary part-time staff to assist full-time staff with their current duties.

The JPC combines the necessary areas of expertise for the successful planning and initial implementation of this project and will be comprised of LICM staff and representatives from Nassau County DHHS and Family Court. The full-time Program Manager to be hired for this project will have appropriate qualifications in

Museum Education and/or the Social Services field, and will be responsible for the coordination and implementation of the project. [See attached job description for Program Manager.] Using assessment tools designed by ILI, the JPC, as well as smaller groups within the JPC, will meet monthly throughout the project and will be responsible for carrying out all tasks. [See attached List of Key Project Personnel for detailed list of JPC and NAC members.]

Since 2003, Edith Gonzalez de Scollard (Ph.D. ABD) has led a team of more than 50 staff as the Director of Education. In this role, she spearheads professional development, community outreach, and educational offerings for the Museum, as well as cultivating community and institutional partnerships. She brings more than five years of museum experience and a strong background in teaching and research. She is currently in the Doctoral Program in Anthropology at The Graduate Center, City University of New York.

Heather Petrie DeTommaso earned a M.S. in Elementary/Childhood Education from Columbia University, Teachers College (NY). As the Museum's Early Childhood Educator, her responsibilities include program development, coordination, and management, content development for publications, and parent education. She also has extensive experience as a facilitator of Professional Development Workshops for classroom teachers. Prior to coming to the Museum in 2002, Heather was herself an award-winning public school teacher and 1995 nominee for New York State Teacher of the Year.

Aimee Terzulli earned a B.S. in Art Education from Long Island University (NY), and has served as Outreach Program Manager for the Museum since 1993. In this capacity, she has been responsible for coordinating the community outreach department, developing and teaching school and community outreach programs, and procuring and organizing program materials.

Cheryl Kessler, Research Associate with The Institute for Learning Innovation, will be the evaluator for this project. ILI was established in 1986 as a not-for-profit learning research and development organization and is led by John H. Falk and Lynn D. Dierking. ILI collaborates with a variety of free-choice learning institutions such as museums, other cultural institutions, public television stations, libraries, community-based organizations such as scouts and the YWCA, scientific societies and humanities councils, as well as schools and universities, striving to better understand, facilitate and improve their learning potential by incorporating free-choice learning principles.

[November 29, 2004]

Suozzi Unveils "No Wrong Door" for Nassau County Residents

Innovative Health and Human Services Smart Government Program Means Better Services and Lower Costs

Mineola, NY.—Nassau County Executive Thomas R. Suozzi today announced "No Wrong Door," an innovative smart government program that will provide significantly enhanced service to Nassau County's human services clients, while at the same time allowing the County's eight health and human services departments, which will be consolidated into a single facility with a simplified intake process, to operate more efficiently. "No Wrong Door" is a new model for Nassau County and is on the cutting edge of government service delivery nationwide.

"'No Wrong Door' is a dramatic step forward in making Nassau County government both more compassionate and smarter. Through this enhanced service delivery system, the County will better serve the public, and at the same time, save taxpayers money in the long run by putting an end to inefficiency and waste," said County Executive Suozzi. "By having all our health and human services departments in one location, we will provide better services to countless county residents who no longer will have to travel from building to building to receive all the services they need. I am proud that we are launching a program that is both the right thing to do on a human services level and the smart thing to do fiscally."

The eight health and human services departments include the Departments of Social Services, Health, Mental Health, Drug & Alcohol, Senior Citizen Affairs, Youth Board, Veterans Service Agency, and the Office for the Physically Challenged. The planned move of these departments to 60 Charles Lindbergh Boulevard in Uniondale, which is expected to be completed by the Summer of 2005, makes it possible for the County to deliver improved government services in a cost-effective manner.

The move to the new Health and Human Services Center is the first major step in County Executive Suozzi's comprehensive building consolidation plan. Currently, the five existing buildings housing the eight departments are riddled with structural problems; including a leaking roof, asbestos and a dangerously insufficient electrical system and many are non-compliant with the Americans with Disabilities Act of

1990. In addition to all the benefits associated with "No Wrong Door," the move of these departments is necessary to avoid the cost of rehabilitating these buildings, which has been conservatively estimated to cost more than $40 million.

The "No Wrong Door" system of care will enable the County to meet a continuum of needs for each resident through a single point of entry. The new building will also feature a comfortable and inviting waiting room and a welcome desk staffed with trained customer service professionals to greet and guide residents.

"Countless pieces of legislation that created the American Welfare State were well intentioned but not necessarily well-implemented. But that era taught us that you cannot legislate compassion, you cannot legislate common sense and you cannot legislate practical thinking," the County Executive said. "Today we begin a long journey to provide better, more effective services to our residents most in need. We will do so, not by spending more money but by management better, communicating better and coordinating our existing resources more effectively. In the long run we will better help people and save money."

"Nassau County's 'No Wrong Door' will incorporate co-location of services, consolidated intake function, and an outcome-driven planning process," said Dr. Mary Curtis, Deputy County Executive for Health and Human Services. "It will be a model system which was developed collaboratively by a diverse group including Nassau County Health and Human Services leadership, departmental staff, community-based organizations and local colleges and universities to better serve those in need."

[Additional materials submitted by Ms. Nunez follow:]

[From the Arizona Daily Wildcat]

Turning the page

UA program helping minority students put new faces on librarians

By CLAIRE CONRAD

The UA is working to reshape the image of librarians.

The stereotype of the grumpy middle-aged white woman is being combated by the Knowledge River program, based in the School of Information Resources and Library Science. The program offers financial assistance to Hispanic and American Indian students pursuing master's degrees in information resources and library science. And, yes, the group includes men.

By graduating more minority librarians, libraries are better able to work with a community's needs and create a more equitable access to information, said Patricia Montiel Overall, an assistant professor of library science.

The need for more minority librarians is evident.

American Indians represent less than 1 percent of all librarians and Latinos represent only 2 percent, according to a diversity report issued by the American Library Association based on the 2000 U.S. Census.

Graduates of the UA's library science program are a youthful, more technology-oriented group, said Jessica Hernandez, a Knowledge River student. Alumni have created a MySpace.com group through which they can blog about their experiences.

Commitment to community is a value many of the librarians share, Overall said.

"Generally, our students are very committed to community, social justice issues," she said. "You get a cadre of people who all just support each other in trying to improve social issues for everybody."

Since its inception in 2001, the program has also been working toward bridging the gap in information access.

Knowledge River student Paulina Aguirre hopes to use her degree to improve the lives of those in her native Hopi reservation.

"We don't have a library, a fully functioning and operating library on the Hopi reservation, so I figure I could do something about getting one," she said.

In the Sam Lena-South Tucson Branch Library, where Knowledge River student Sol Gomez works, it can be difficult for Spanish-speaking adults and children to learn computer skills when classes are taught in English.

Gomez works on developing programming for the mainly Hispanic South Tucson community, including computer classes in Spanish. Gomez had never considered a career in librarianship until he heard of the Knowledge River program from his sister-in-law, a graduate of the program.

"I didn't know what I was getting myself into, but once I did, I was very happy I did," Gomez said. "I was always into working with the community, so once I was in library school, I thought this was the place I belong."

Knowledge River also helped Aaron Valdivia find his place in the Tucson community.

Valdivia, a Knowledge River student from Phoenix, is working alongside six other program students and a group of 12 Sunnyside High School students to develop presentations and posters about common health issues students in Southern Arizona face, with a focus on Hispanics and American Indians.

Because the School of Information Resources and Library Science offers distance courses, Valdivia said, he could have completed all the work from Phoenix.

Knowledge River required him to take classes in Tucson, and he's glad he did.

"It's like I actually see the effect I'm having on the community, rather than just sitting on the computer," Valdivia said.

Knowledge River: Community Impact and Service to Latino and Native American Cultural Groups

Submitted by
Bruce Fulton, MLS
Patricia Tarin, MLS
Jana Bradley, PhD.
12/22/2006

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Introduction

At the request of the Arizona State Library, the University of Arizona School of Information Resources and Library Science (SIRLS) developed and administered a survey instrument designed to assess community impact of the IMLS funded SIRLS Knowledge River.

Knowledge River Director Patricia Tarin, SIRLS Director Dr. Jana Bradley and SIRLS Staff Librarian Bruce Fulton developed the survey instrument for administration to volunteers comprised of Knowledge River graduates. The survey consisted of 22 questions including multiple choice, Likert scale and free-form text survey elements.

The questions were designed to elicit the graduates' subjective observations of Hispanic/Latino and Native American patronage of their institutions, the services offered to these populations by the institutions, and the involvement of the graduates in providing existing and new services. Responses indicating new or improved information services to Hispanic/Latino and Native American groups served by the graduates' employers or greater participation/patronage by these groups were interpreted as evidence of positive community impact.

Now in its fifth year, Knowledge River has graduated 53 students as of spring of 2006. Most students completed the program in 18 months to 2 years. Although current contact information for all graduates is not available, most subscribe to one or more listservs serving KR alums or SIRLS graduates. Postings to these listservs requesting voluntary participation from KR graduates resulted in a response rate of 47% of eligible participants, a total of 25 responses. The survey opened on SurveyMonkey.com on October 23, 2006 and closed on November 30, 2006. Participants were offered the opportunity to enter their names for a drawing for a $100 gift certificate, but the survey was otherwise anonymous and names were tracked separately from survey responses.

Executive Summary

The data indicate that information service to Latino and Native American cultural groups remains problematic among the institutions currently employing Knowledge River graduates (questions 8 – 11). Respondents indicated that while 87% of the institutions represented serve Latino cultural groups, only 39% maintain an active program of services for them. For Native American cultural groups, these numbers are 61% and 30% respectively. Knowledge River is nevertheless having a positive impact on its graduates, the institutions they serve, and the communities served in turn by the institutions. Graduates have found employment in a wide variety of libraries including academic, public, school, special and corporate libraries. A majority work in either academic libraries or public libraries (question 4). Most work in large urban settings, but many work in small urban or rural communities (question 5).

Fully 80% of the respondents indicate they personally provide a variety of information services to Latino and Native American cultural groups (question 14). Further, more than half of the graduates report that they or their institutions are offering new services to Latino and Native American cultural groups since beginning their employment.

Knowledge River graduates hold positions of influence in collection development, archives, special collections, language acquisition and general reference (question 15). Nearly one quarter of Knowledge River graduates report they hold management track positions in their current place of employment (question 7).

When asked to judge community impact, over half the respondents agreed that services to Latinos and Native Americans have increased since they began and that the services that are offered to these groups are improving (questions 18, 19). Over half also agree that more Latinos and Native Americans are using information services at their institutions and that the graduates themselves are a part of the reason information service provision to these cultural groups are increasing (questions 20, 21).

Finally, 75% of the Knowledge River graduates who responded to the survey indicated that Knowledge River prepared them for information service to Latino and Native American Communities (question 22).

The total number of Knowledge River graduates is small and subject to sampling error, although a response rate of nearly 50% is high for this kind of survey. Nevertheless, the responses indicate that there is reason to believe that Knowledge River has a positive impact on the communities and institutions served by its graduates. The impact should increase as more Knowledge River graduates enter the profession and gain more experience and influence in their communities.

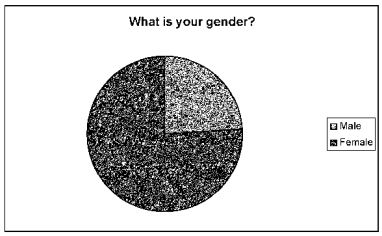
Survey Results

The survey instrument consisted of 22 questions in five parts: Respondent demographics, employer profile, community service, community impact and self-evaluation.

Respondent Demographics

Sex

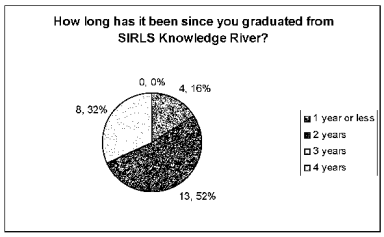
Of the 25 respondents, 19 (76%) identified as female, 6 (24%) as male.



[Question 1]

Experience

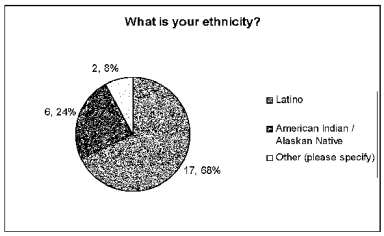
The majority of respondents, 13 (52%), graduated two years prior to the survey. One third, 8 (32%) graduated three years prior to the survey and 4(16%) graduated one year or less prior to the survey. No respondents indicated they graduated four or more years prior to the survey.



[Question 2]

Ethnicity

The majority of respondents, 17(68%), identified as Latino; a smaller number, 6(24%) identified as American Indian/Alaskan Native. This is consistent with the proportions recruited overall among these two groups, and their relative proportions within the total population. Of the two individuals responding as other, one self-identified as Spanish-White; the other as Chicana.



[Question 3]

Current Employment

Place of Employment

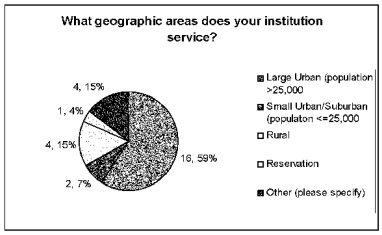
Survey participants report working in a variety of institutions. Given a choice of academic, public, school, digital library or other type of institution, the majority selected academic or public libraries. Respondents selecting "Other" were asked to specify the type of institution, as shown below:

Academic Library	9
Public Library	7
School Library	2
Digital Library	0
Other type of institution or library:	7
Academic Law Library	1
Community College	1
Elementary school	1
Unemployed	1
Medical	1
Corporate Library	1
Academic/Public	1

[Question 4]

Populations Served

A majority of respondents, 16(64%), work in institutions that serve large urban areas of greater than 25,000 population. Only one respondent reported working on a Reservation. Of those selecting "Other", the responses include "University Only," "None," "Alaska Native Regional Corporation," and the State of Arizona.



[Question 5]

Job Titles

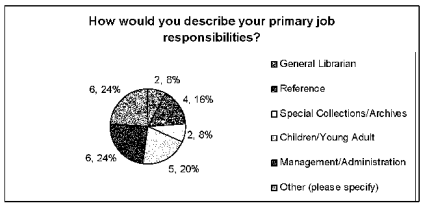
Respondents were asked to specify their current job title, as shown in the following table:

Reference Librarian for Foreign and Intl Law; Latin American and Iberian Legal Bibliographer; Lecturer in Legal Research	Librarian I
Marketing Specialist	Librarian I
Library Manager	Teacher-Librarian
Archival Collections Specialist	Director
teacher	none
reference & instruction librarian	Network Services Coordinator
Head of Reference	librarian-teacher
National Library of Medicine Fellow	Records Manager
Information Services Librarian	Administrative assistant
Library Information Analyst	Manager
Assistant Research Professor	Archivist
Senior Assistant Librarian	Assistant Branch Manager
Multicultural Studies Librarian	

[Question 6]

Primary Job Responsibilities

Respondents were also asked to categorize their positions. Management and administration counted for nearly 25% (6) of the total, with children/young adult services running a close second (20%, 5). An additional 25% (6) selected "Other," and these responses included none, multiple titles, technical/professional, administrative support, management understudy and customer support. Although no one selected acquisitions, several respondents indicated that they have an influence in selection and acquisitions in later responses.



[Question 7]

Service to the Community

Cultural Groups Present

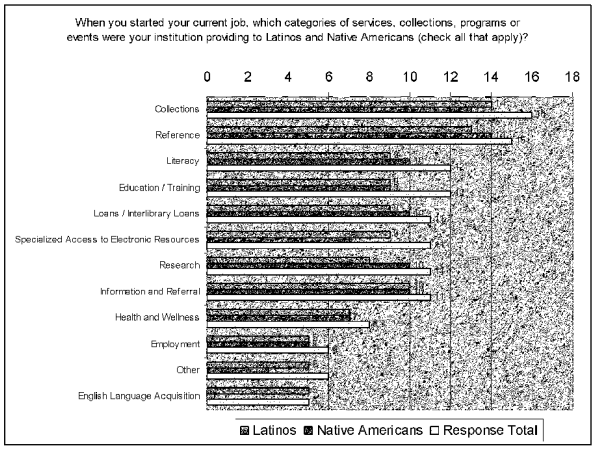
Of 23 responses, the majority indicated that their institutions included Latino cultural groups in its service population (20, 87%) and Native American cultural groups in its service population (14, 61%). Two respondents did not answer the questions. [Questions 8 and 9].

Cultural Groups Served

On the other hand, when asked, "When you started your position in this institution, was there an active program of services to Latinos?", only 9 of 23 respondents (39%) answered in the affirmative. Only 7 of 23 respondents (30%) answered in the affirmative when the question reflected active programs of service to Native American cultural groups. Two respondents did not answer the questions. [Questions 10 and 11].

Services Offered - Institutions

The survey asked the respondents to consider the services offered to Latino and Native American cultural groups when they started their employment. Of the total of 25 respondents, 5 did not answer the question. In the table that follows, respondents could choose any/all that apply.



[Question 12]

Key Services - Institutions

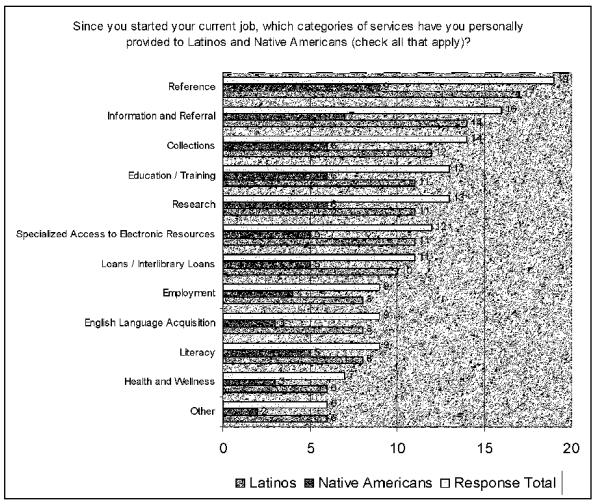
Participants were also given the opportunity to provide open-ended text responses to elaborate on services. The question, "Describe what you feel are the most important services your library was already offering to Latinos and Native Americans," elicited the following nineteen responses:

- My academic law library provides services to all students, professors, attorneys, and other researchers that come into the library. There are no special services for other people or populations. We currently have no native American law students or professors; we have no Latino professors. But we do have a number of Latino/a students and visiting scholars (both US and foreign-born) and I work closely with them.
- Library served as a center for information for all urban activities which included those for Latinos and Native Americans
- General Community College library services
- Collections, access to electronic resources.
- The library had a new collection of 800 books in Spanish. The collection for Native Americans was books about Native Americans with some opposing viewpoint books about Native American issues.
- The library provides specialized instruction on issues that pertains to Latinos and Native Americans.
- There were none.
- I am not employed yet as a librarian. I have tried to no avail so far because I am looking for part-time
- general reference
- In the last few months, the Library has started offering a Spanish Story time which is performed by a non-library person.
- Access to library collection.
- I work at an academic medical library where services are not catered specifically to Latinos or American Indians.
- Consumer Health Information - Pamphlets/brochures.
- Not working in the library field
- Providing services-we are a large University which has a diverse population of customers
- At the three different libraries I have been at, we had ESOL classes, citizenship classes, computer classes in Spanish, programming such as Ballet Folklorico to attract Latinos and inform other groups about the culture
- Research bibliographies, outreach to multicultural/international student centers
- The research collections and community programs
- Collection development

[Question 13].

Services Offered – Respondents

Respondents were provided the opportunity to describe the kinds of information services they personally have provided at their current place of employment. Of the 25 respondents, 5 (20%) did not provide answers to this question. In the table that follows, respondents could choose any/all that apply.



[Question 14]

Key Services – Respondents

Participants were also given the opportunity to provide open-ended text responses to elaborate on services. The question, "Describe what you feel are the most important services you have personally provided to Latinos and Native Americans," elicited the following twenty responses:

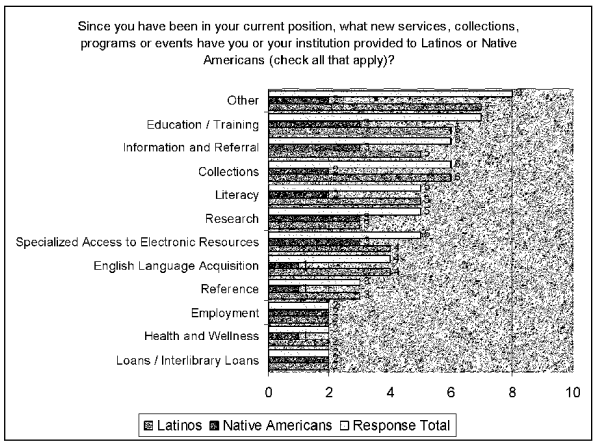
- I have provided no services directly to Native Americans because we have no NA students or faculty. However, I purchase indigenous books whenever possible in my role as Latin American bibliographer. The most important services I've provided to our Latino/a students and visiting researchers include: teaching legal research in Spanish to our foreign-born students, purchasing Spanish-language materials (written and electronic) for Latin American collection (for legal research purposes), and providing LOTS of 1-on-1 legal reference assistance in Spanish, both written (email) and spoken. I am also the co-chair of the brand new (1 year old) Library-wide (not just law) Diversity Council. We have just finished our Strategic Plan and will shortly begin implementation. The Plan includes strategies for minority recruitment and retention, and for creating a more welcoming environment for people from underrepresented groups.
- Computer/language acquisition services to parents of young children
- Services provided as a web master and general information services
- Reference, Access, and referral.
- I speak Spanish and being a Latina, I know the culture. I am able to provide more sensitivity to Latino students to meet their needs and purchase materials that are relevant to them. I am able to provide more visual presence to Latino culture to make students in a school where 86% are Latino feel that their culture is important. At the same time I am more aware of the need to be sensitive to all cultures and include this philosophy in matters of acquisitions, collection development and Library programs.
- I am the head archivist for the Oregon Multicultural Archives which is a program that strives to document ethnic communities in Oregon.
- Started a Bilingual collection. Working on more access for Spanish speakers. Opened the doors to welcome in people of color, where none existed before. We are just beginning!
- education in information literacy
- Unofficially, I am a contact person between the library and the Native American student, faculty and staff population which is very small.
- Latinos and Native Americans (and the Marshallese) tend to come to me with their questions as I am the only Native person in the building. There are 2 Black people on the staff but I've noticed that I am the one patrons come to if they have questions. I am glad to be the one to make the minority populations feel more comfortable.
- Knowledge of new technologies to assist Native American students and teachers.
- Again, my library does not provide specific services exclusive to Latinos or American Indians.

- As a Latina I have been able to have provide a voice in the development of services and programming. I have made the library more accessible to researcher and health care professionals working with Latinos, and in the area of Hispanic health.
- information and referral services
- everything-they are a customer we provide services too
- The most important would have to be reference service done in Spanish. To many Latinos, finding someone who speaks Spanish at a library is rare. Other services include: outreach to Hispanic book festivals and other events, being an advocate for Spanish language materials, encouraging programming that reflects the Latino culture
- My collection-development responsibilities have afforded me opportunities to strengthen our collections of Spanish language resources including music, films, and other resources.
- Reference, Information Literacy, Research
- from question 14, I would not known if the patron was Native American or not. All services are important.
- Access to information and support for coursework on a personal level that was previously missing.

[Question 15]

New Services Offered

Respondents were asked to indicate new services for Latino and Native American populations since assuming their current position. Here, more than half (56%) of the respondents (14 of 25) indicated that new services were implemented in their place of employment. In the following table, respondents could check all that applied.



[Question 16]

Key New Services

Participants were also given the opportunity to provide open-ended text responses to elaborate on services. The question, "Describe what you feel are the most important new services you or your institution have provided for Hispanics, Native Americans or other diverse clients," elicited the following seventeen responses:

- I am the only Spanish-speaking professional librarian on staff. There is one Spanish-speaker on the circulation staff. Together we have planned events for Hispanic Heritage Month and National American Indian Heritage month. We have raised the level of awareness on Latino/a and NA issues in the law library and law school through our events (movies, lectures) and displays. New services: We can now offer reference help and instruction in Spanish. Print and electronic materials are now available in Spanish as well.

- In addition to computer and language classes, we have provided many information sessions and have begun collecting more Latino children's literature and have designed programs to accompany such acquisitions
- Information services have been enhanced from previous levels based on improved web access.
- Outreach, culturally relevant story times and programming.
- Our acquisitions and collection development has taken a new direction to provide more resources that are relevant to the Latino Culture and Native American Culture, plus cultures from around the world. We have also been active in RIF and ordered books that families of these cultures can read and appreciate together.
- Under the Oregon Multicultural Archives we have created a digital collection of visual materials for people to use for their research on aspects of ethnic communities.
- Same as above.
- books in their language
- Our library has just established liaison librarians who work with the Latino and Native American population.
- The Spanish Story time was a welcome addition to a growing Latino population.
- Information and reference.
- I have expanded the collection with information resources that address the specific health information needs of Arizona Hispanics. I have expanded outreach services by participating in community health fairs, forums etc. I have customized training for health professional and information specialists serving the Latino population. I have disseminated valuable information on grant opportunities for faculty and researchers working on health disparities that affect Hispanic and Native American communities. I have provided comprehensive literature searches for researchers and clinicians.
- not in the library field
- Services to Hispanics were already in place when I was employed here. I have continued to be an advocate for those services.
- The university has instituted a Latina/o student organization with ties to the library. One of the programs which highlights strengths of the collection has focused on Spanish resources and literature related to immigrations issues.
- I would not know for question 16....
- Collaboration with Indian community colleges and assisting in gaining access to information for students not on UNL campus.
  [Question 17)

Community Impact

To assess the impact of the institutions and Knowledge River graduates, we asked respondents to indicate whether they agreed with five statements using a five point Likert Scale, with the following responses: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). The small overall sample size skews the averages somewhat, so the actual number of respondents selecting 3 or higher is also given.

Q. *Compared to when I began, services, collections, programs and events for Latinos and/or Native Americans at my institution have increased. [Question 18].*

Over 50% of the respondents agreed or agreed strongly

Average Response: 3.1

Standard Deviation: 1.4

Q. *Compared to when I began, services, collections, programs and events for Latinos and/or Native Americans at my institution have improved in quality. [Question 19].*

Over 50% of the respondents agreed or agreed strongly

Average Response: 3.3

Standard Deviation: 1.4

Q. Compared to when I began more Latinos and/or Native Americans are using the services of my institution. [Question 20].

Over 50% of the respondents agreed or agreed strongly

Average Response: 3.2

Standard Deviation: 1.9

15 of 21 respondents rated the statement 3 or higher

Q. I feel I am contributing to serving Latino and/or Native American communities within my current position. [Question 21].

Over 50% of the respondents agreed or agreed strongly

Average Response: 3.7

Standard Deviation: 1.4

Q. Overall I feel Knowledge River/SIRLS prepared me to serve Latino and Native American communities. [Question 22].

Over 75% of the respondents agreed or agreed strongly

Average Response: 4.2

Standard Deviation: 1.1

APPENDIX 2

WE Search Progress: Final

By AARON J. VALDIVIA, CECILIA TOVAR, PAULA MAEZ, ADRIANA RENDON, ARIC VILLARREAL, IRENE MORALES

This is our final progress report for the WE Search project 2007. Much of what follows is a review and summation of the entire semester, with the final module project included:

As was mentioned in our first progress report we broke down the semester into modules, the completion of each being a step closer to our larger goal. This was broken down even further: each Knowledge River mentor was responsible for teaching his or her mentees the information that was the topic of the module which the whole group was working on. In summation, the semester went as follows:

MODULE 1

Our mentees learned the information that we wanted them to learn in the first module:

• Health disparities facing Latinos and Native Americans, and the causes of those disparities.

• Becoming familiar with quality resources that expose those disparities and other sources of research on health issues (Center for Disease Control, U.S. Census Bureau, etc.)

MODULE 2

The goal of the second module was likewise achieved. This was developing a familiarity with free resources that can be used learn about ways to curb the health disparities examined in the first module:

• The students/mentees all learned about the various consumer health resources that are available to the public via the World Wide Web. They also learned about the importance of the library as a resource for getting access to the web, or access to consumer health information materials that are available in print.

• There are "special libraries" available to the public (law libraries, medical, etc.—emphasis was given to medical, given our health focus).

• Creation of informative pamphlets and brochures that could be given out to people as a form of information on specific diseases and health issues.

(Also during this module we started to take what we learned to classrooms at Sunnyside High School, to disseminate the information to our mentees/students' peers)

MODULE 3

The third module goal was to do something positive for the community with the knowledge and resources from the first two modules:

• The students/mentees participated in at least one outreach event each. The outreach events were a time to see, first-hand, the impact that knowledge of such resources as mentioned above have on the community.

• There were three events that we participated in: The Junior Scientists Kids Day at the University of Arizona, the Tucson HopeFest, and Academic Night at Sunnyside High School.

• Each event was a chance for our mentees/students to prove to their Knowledge River mentors that they were capable of applying what they had learned to real-life outreach situations; essentially, that they (the high school students) have become knowledgeable enough to teach others about the resources they studied throughout the semester up to this point.

MODULE 4

We also wanted to create a permanent resource for the students to reflect back on, and for their peers and the rest of the community to be able to use in a practical way after we finished our program:

• We have created a Web page that will be our permanent resource. This is a prototype for the program that was created at basically no cost since we used free Web 2.0 tools. This page was created using the free webpage-creating software "Googlepages".

• Googlepages allow one to choose between four different "layouts" for the page, and numerous different "designs". While such has its limitations, it was very useful for our purposes in that it:

• Illustrated for our mentees the positive uses that can be attained from Web 2.0 tools (something that is greatly stressed and used by professionals working in the library science field)

• Gave us a way to house a bibliography of usable resources in some permanent fashion

• Allows us to have a digital documentation of our work and of the program

When we first started the planning for WE Search last spring we had mentioned, in a meeting, that we would like to tie in social software and its positive applications to the achievement of our own goals for WE Search. Myspace, Flikr, Facebook, Youtube, and others were all discussed. However, the commercial advertisements that come with each of those (and other potential problems) presented too many complexities (many of the mentees already have personal Myspace accounts, the content of which could potentially conflict with the professional appearance that we hoped for our program site). We did utilize blog software. Each student/mentee was

allowed to comment on the blog, but the comments had to be approved by one of the Knowledge River mentors.

(Our blog can be viewed at *www.wesearch.wordpress.com*). Our blog also gives a chronological timeline of our activities throughout the program.

Building on the idea of teaching the students/mentees about free Web 2.0 tools, we decided to use the free Googlepages to create our permanent resource. Our webpage required much thought and planning; not in the design and layout (those are set templates provided by Google), but the content and the logistics as far was what is linked to what had to be considered. We knew we wanted three primary links on our "homepage": something that told about us, a section that explains what we do, and a permanent usable resource section that would demonstrate the mentees/students' work, and could be used by the public. The "about us" we titled "Who WE are"; the sections that tells what we do is called, simply enough, "What WE do"; and the permanent resource link is "For YOU!" For each linked section the content is broken down as follows:

Who WE are:

Each student/mentee was required to write a short bio and basically tell about what they got out of the WE Search program. We asked them to think about what they learned about doing quality research, evaluation web resources, the importance of consumer health information, and the impact that doing public outreach can have on their community. We allowed the mentees/students to include one picture of themselves, in addition to a picture of them participating in the program. The Knowledge River mentors also created individual web pages so there are eighteen pages in all linked to this section. Each page tells web users who we are as participants in the WE Search project.

What WE do:

We have pictures from various stages throughout the semester on this page. There are images of the entire WE Search group participating in our weekly Wednesday morning health activities (such as yoga and cardio kickboxing), most of which were courtesy of Pima County Public Libraries' "Teens Fit for Life" program. There are miscellaneous images of the Knowledge River mentors and their students/mentees working in the career center at Sunnyside High School. There are pictures from two of our outreach events: Junior Scientists Kids Day at the University of Arizona and the Tucson HopeFest. Also, there is a link to our blog on this page so any user looking at this site can find more information about the progress of WE Search and see a bit more about what we did throughout the semester.

For YOU:

This is a basic annotated bibliography. We had each of the students/mentees pick one of the consumer health websites that we examined and used throughout the semester; and the student/mentee wrote a brief description of the site. This being the case, we have twelve resources listed. We also linked to the actual websites from our bibliography. The annotation for each site was written by the student/mentee that chose that resource and it was reviewed by a mentor before being added to the Google page. The purpose for this section of the webpage was for the students to get an idea of what it means to create an annotated bibliography (which none of them had previously done) and they can see how such can be a resource to benefit the public (their own community).

(The site can be viewed at *http://wesearch07.googlepages.com/*)

This basically summed up the content for this year's program. The final thing we did was to give performance reviews to each of the mentees; and we had them fill out an online survey on Survey Monkey so that they could give the mentors feedback too. We rated the students/mentees on a five point Likert scale for their performance and the survey that the mentees filled out regarding what they thought of the program was also a Likert scale. We have yet to compile all of the results from both surveys. The students all performed well. There were no "below average" overall ratings for any of the students/mentees.

The last thing to consider for this year's WE Search program is what we (Knowledge River mentors) call "future prospects" for this program, should it continue next year and possibly (hopefully) for years beyond that. This is essentially the work of a brainstorming session in which the Knowledge River mentors considered the future of the WE Search project; what could be done to improve it, what should stay the same, etc:

Future Prospects:

- Shortening of the 1st and 2nd modules (1 week), lengthening of the 3rd and 4th modules (1 week).

• We believe that the first two modules could be shortened to approximately two weeks each, and the 3rd module (outreach) could be lengthened to accommodate more outreach events (see below). The 4th module could be lengthened likewise, to allow for more time working on teaching the mentees technology skills (we had envisioned teaching them basic HTML to give them an idea of how web page building really works, but time did not permit this year—it would be beneficial to the students/mentees to incorporate such in to the program).

• A number of the students/mentees indicated that they would have liked to have done more outreach events outside of their own school.

• This got the largest response from the students/mentees. We only really did two major outreach events outside of the school. Investigation of more events like HopeFest and Junior Scientists Kids Day could be a part of the next year's WE Search groups' tasks for the start of the semester, for the first two modules. Since there are already resources now created for this project (laminated poster board materials, trifold pamphlets, etc.) more time can be spent actually outside of the school at different events. All of the students responded well to the actual "doing" part of this program: getting outside of the school and putting what we were learning to use for the community.

• Keep a roster of those students who are juniors so they may be contacted to possibly become volunteer peer mentors for the new WE Search group(s).

• This would greatly enhance the experience for the students. Our 2007 WE Search group did not have the contact information for the previous year's high school students who were involved in the project. The project is for juniors and seniors. If we had the support of the previous year's juniors (now seniors) it may have helped our own students/mentees in that they would have a peer-to-peer contact.

• Mentors should take careful role and state student/mentee expectations in advance; maybe even by having each of the students/mentees sign a contract.

• This was one of our only minor setbacks/concerns; students being late or absent. Especially since we did our outreach outside of the school on weekends or nights, it was sometimes difficult to explain to the students how much this counts towards their final pass/fail status. It has been suggested that careful role be taken by having students sign in and out during the class period and for the outreach events. Also, while it is required that the students/mentees contribute 10 hours of work per week, this should be more clearly expressed in a contract they sign at the start of the program. It should be highlighted and stressed to the students that they will be required to participate in at least two outreach events for which they must set aside time outside of regular class time.; whether they pass or fail the program and their payment should depend on this.

(We did have all of the students participate in at least one outreach event, though—clearly stated written requirements and expectations would make this a much easier goal to relate)

• More collaboration and communication with other programs liked WE Search.

• There is the VIVA project in Texas that is similar to WE Search. While the Knowledge River mentors did communicate with the members of that project in early on, it would benefit the high school students to do so likewise throughout the semester. Since the overarching goal of the WE Search program is to increase quality of life for underserved populations in border areas, it makes sense to collaborate with other programs with similar goals. VIVA in south Texas is a good starting point. Research to find other similar programs could be one of the tasks of the forthcoming WE Search groups.

In conclusion, while we feel that this project was a success, we also believe that achieving the true goal of a project like WE Search really requires long-term commitment. The overarching objective for the semester was to have a positive impact on quality of life for specific underserved populations in the South Tucson and Tucson neighborhoods; to curb health disparities among historically underserved ethnics groups, like Latinos and Native Americans. Much research is needed to see what the impact of a project like WE Search would be on achieving such a goal over the long term. However, a step in the direction towards this goal is promotion of projects like WE Search. On a micro scale the project for the 2007 fall semester was a definite success. Our students/mentees are knowledgeable enough to be mentors themselves and this will have a definite impact on those they interact with: their families, peers, communities. Through continuation of a project like WE Search we will see a macro impact on the target communities of such a project.

[From the Tucson Citizen, January 4, 2007]

UA Pushes for More Minority Librarians

Federal aid drying up; private funding sought

By CLAUDINE LOMONACO

Sol Gomez's favorite book is "The Count of Monte Cristo," the tale of a wrongly imprisoned man who avenges himself using the education he gains from a priest, and fellow inmate, while behind bars.

Gomez, 29, took the story to heart.

"Education is your only revenge," said Gomez as he stood between stacks of books at the South Tucson Library.

Gomez grew up doing construction jobs with his father but now is a head librarian, dishing out knowledge, books and computer skills to as many people as he can lure through the library doors.

As a Hispanic and librarian, Gomez is a rarity. Hispanics make up 2 percent of all librarians but 12.5 percent of the population, according to a recent study by the American Library Association based on the 2000 census.

American Indians are similarly underrepresented, and comprise less than 1 percent of all librarians.

A master's program in library science for Hispanics and American Indians at the University of Arizona is working to improve the statistics.

The Knowledge River program is the only one of its kind in the country and has enrolled or graduated nearly 100 Hispanic and American Indian students since it began in 2001.

They have gone on to work everywhere from community libraries to the nation's premier institutions in Washington, D.C., but the program faces an uncertain future.

Its federal funding, about $200,000, will end within two years, and administrators are gearing for an uphill battle to raise the private dollars needed to save the program.

For many people who don't have other access to books and technology, libraries can be the gateways for information, knowledge and empowerment, said Patricia Tarin, who directs and helped start the program.

"But many won't use a library if there's nobody there that shares their culture or speaks their language," she said. "Institutions must have the face of the communities that they serve."

Each year, Knowledge River enrolls about 18 Hispanic and American Indian students who receive full tuition and a part-time library job to cover living expenses. The aid is crucial to attracting minority students, Tarin said.

"Most do not have a lot of financial resources to begin with," she said. "Many of them acquire a lot of debt in undergraduate school, so the idea of going to graduate school without financial aid is very, very difficult."

The program offers the chance to go through school with a "cohort," or tight-knit group of fellow students. That way, support and networking opportunities once they leave school are available.

It also offers multicultural coursework, such as Latino children's literature.

Roberto Trujillo, who directs Stanford University Library's special collections department, taught a course for the program in 2005 on archival material, with a Mexican-American emphasis.

"Frequently, libraries don't collect that material," he said. "If you have people with a sensitivity and sensibility towards those literatures and those histories, the likelihood of that record becoming part of library collections is much greater."

The program brings in national figures such as Trujillo to give students a broad perspective on what they can accomplish. The program is designed not only to produce librarians, but to turn out leaders poised to ask fundamental questions about how libraries can better serve Hispanics and American Indians.

"You show students the possibilities by introducing them to people and having them think of themselves as an advocate," Tarin said. "If you're not going to work on problems that lead to a better situation for your community, who is?"

Graduates from the program have an impressive track record.

In October, Gomez was one of 25 librarians tapped for national training funding from the Bill and Melinda Gates Foundation on how librarians can reach out to the Hispanic community even if they don't speak Spanish. Tips range from knowing the correct Hispanic last name to use on a library card since many Hispanics use two last names, to partnering with community groups that can help libraries reach out to Hispanics. Gomez will conduct workshops for local librarians throughout 2007.

Knowledge River graduate Roberto Zapata, who manages a midsizelibrary in Houston, was one of 10 librarians asked to serve on the selection panel for the pres-

tigious Caldecott Award, which honors the best illustrated children's books each year. Zapata was also named one of the American Library Association's emerging leaders for 2006.

Oscencio Tom, who graduated with Gomez in 2004, is completing a two-year fellowship at the National Library of Medicine in Bethesda, Md.

Tom, 26, was born and raised on the Navajo Nation in northeastern Arizona by a single mother with an eighth-grade education. The first in his family to graduate from college, he plans to take the technology he's learning in his fellowship back to his reservation one day.

"We need to bridge the digital divide, not just for Navajos but for all minorities," he said. "Librarians can make a huge difference there."

Knowledge River echoes two similar efforts in the 1970s, one at California State University, Fullerton and the other at the UA. Both folded when their federal dollars dried up.

"The federal government will fund you for four or five years and then they'll cut you loose," said Trujillo, who graduated from the Fullerton program in 1975. "And if the local school can't pick it up on its own, then it just dies. And then it gets resurrected somewhere else."

Years can go by in the process, and schools are forced to build new programs from scrap.

Tarin hopes to avoid that fate by raising private funds over the next year. She has worked to reduce the program's cost to about $200,000, 50 percent less than the first year, when students weren't required to work.

Those who have gone through the program say they never would have become librarians without it.

"I didn't even know it was a career until I heard about it," Gomez said. "But once I got in, I loved it. I saw other students like myself and I felt comfortable. When I went to college, I thought librarians were that elderly woman with gray hair and glasses you would never want to talk to because she was always mean to us."

Gomez is a different breed of librarian, one just as likely to listen to Snoop Dog or teach a computer class en espanol as to read Alexandre Dumas, who wrote "The Count of Monte Cristo."

"I want to be a role model for kids and teens," he said, "and let them know the importance of education. The kids see me and they think I'm one of them. But then they realize I went to school and got degrees. If they see that I did it, then they know it's a possibility."

[Additional materials submitted by Ms. Radice follow:]

["Charting the Landscape, Mapping New Paths: Museums, Libraries, and K-12 Learning, August 2004, can be accessed at the Institute of Museum and Library Services Internet address as follows:]

http://www.imls.gov/pdf/Charting—the—Landscape.pdf

["InterConnections: The IMLS National Study on the Use of Libraries, Museums and the Internet," Conclusions Summary, February 2008, can be accessed at the Institute of Museum and Library Services Internet address as follows:]

http://interconnectionsreport.org/reports/ConclusionsSummaryFinalB.pdf

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["True Needs True Partners," 2002 Survey Highlights, can be accessed at the Institute of Museum and Library Services Internet address as follows:]

http://www.imls.gov/pdf/m-ssurvey.pdf

[“Nine to Nineteen, Youth in Museums and Libraries: A Practitioner’s Guide,” April 2008, can be accessed at the Institute of Museum and Library Services Internet address as follows:]

http://www.imls.gov/pdf/YouthGuide.pdf

[Additional materials submitted by Ms. Zales follow:]

New Report:
Libraries Improve Technology Access for Communities Nationwide

Public Library Funding and Technology Access Study, 2007—2008
Report prepared by: American Library Association and Information Use Management and Policy Institute, College of Information, Florida State University, September 2, 2008, www.ala.org/plinternetfunding

KEY STUDY RESULTS & FINDINGS

Libraries Are a Link to Lifelong Education Opportunities
Public libraries are the only community institution that supports the education and learning needs of every person in the community. They are a vital source for early literacy development, homework help, home-school families, distance education and lifelong avocations. The most common purpose for adult online visits to public libraries is to meet educational needs.[1]

- Education and job seeking services are the top two uses of public Internet services that library staff rank as critical to their community.
- More than 83% of U.S. public libraries offer online homework resources for students, serving the educational needs of nearly 41 million school-age children.
- Subscription databases, including practice exams like SAT and GED, full-text newspapers, and World Book encyclopedias, are the most common library Internet service – available in 88 percent of all libraries and 98 percent of urban libraries.

Library Staff Play Critical Roles in Supporting Patron Technology Use and E-Government
As online content and information becomes increasingly critical to both patrons and the business of libraries, library staff time dedicated to helping people get and use online tools is mounting. Library staff reported that, on average, they spend 50 percent or more of their time managing technology and helping patrons learn how to use it effectively.

- In addition to one-on-one assistance offered in all libraries, almost three-quarters of libraries (73.4%) offer information technology training for library patrons.
- 74% of libraries report staff provide as-needed assistance to patrons for understanding and using e-government resources; and more than half of libraries assist patrons in applying for or access e-government services.
- Library staffing lags behind increased technology offerings and patron visits. From 2000 to 2005, there was an 86% increase in the number of computers in libraries, an 18.6% in the number of visits to libraries and only a 6% increase in full-time staff.[2]
- Almost 60 percent of libraries reported that staffing issues were their biggest challenge in maintaining computers and Internet access, citing staff training and a lack of dedicated IT support.

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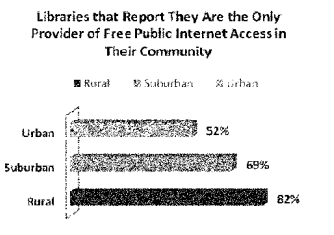
[1] Griffiths, José-Marie and Don King. *Interconnections: The IMLS National Study on the Use of Libraries, Museums and the Internet*. 2008. Univ. North Carolina, Chapel Hill, NC. Accessed August 27, 2008. http://interconnectionsreport.org/

[2] National Center for Education Statistics. Public Libraries in the United States (FY2000-2005).

Millions of Americans Rely on U.S. Public Libraries for Internet Access

Computers and the Internet have become essential tools for individuals working to get an education, find a job, access e-government information and more.

- 99% of public libraries offer free access to computers and the Internet.
- 73% of U.S. public libraries report that they are the only source of free public access to computers and the Internet in their communities.



Public Access Improves as Demand Grows

Ever-growing patron demand for computer and Internet services stretch libraries' existing Internet bandwidth, computer availability, and building infrastructure to capacity.

- For the first time in six years, libraries reported an increase in the number of computers available to the public – up to 12 computers per branch, compared with 10.7 last year.
- On average, 83% of all public libraries report that there are fewer public Internet computers than patrons who wish to use them some or all of the time, up 5% from last year.
- The number of libraries reporting connection speeds of 769kbps or faster increased 11 percent over the past year. More than half of urban libraries (52%), 42% of suburban libraries and 32% of rural libraries now report connection speeds of 1.5Mbps.
- At the same time, almost 58% of libraries report that their current connection speed is insufficient to meet patron demand some or all of the time, up about 5% from 2006-2007. One-quarter of rural libraries report they are at the maximum connection speed available in their communities.
- Wireless availability has increased to 66% from 18% in 2004. While this helps ease the burden on desktop computers, wireless service often strains already overloaded bandwidth. Roughly three-quarters of all library wireless services share bandwidth with public workstations, dramatically slowing Internet connection speeds during high-demand hours.

Methodology

The study surveyed 6,984 libraries and received 5,488 responses (78.6%). A questionnaire also was sent to the Chief Officers of State Library Agencies (COSLA) that asked for more detailed, anecdotal responses to questions regarding funding, staff training and bandwidth. In addition, anecdotal responses were collected from focus groups and site visits in New York, North Carolina, Pennsylvania and Virginia.

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Report Sponsors: Bill & Melinda Gates Foundation (www.gatesfoundation.org), American Library Association (www.ala.org)

Executive Brief

The State of Technology and Funding in U.S. Public Libraries in 2008

Libraries Connect Communities: Public Library Funding and Technology Access Study 2007–2008 marks the second year of the study, funded by the Bill and Melinda Gates Foundation and the American Library Association (ALA), and continues the research of previous surveys conducted by John Carlo Bertot and Charles R. McClure, with others, since 1994.[1] The study presents national and state data gathered through three integrated approaches: a national survey that collected information about public library Internet connectivity, use, services, funding and sustainability issues; a questionnaire sent to the Chief Officers of State Library Agencies (COSLA); and focus groups and site visits held in four states: New York, North Carolina, Pennsylvania and Virginia.

This year's study reinforces a key finding from 2006–2007: Library infrastructure (staffing, space and bandwidth) is being stretched to capacity. This year's report expands our understanding regarding the strain on public libraries to provide public access to the Internet and other technology, and sounds a warning about the long-term sustainability and future quality of free public access to the Internet and other technology in our nation's libraries. Report highlights include:

- Libraries serve a unique and important role in providing free access to all types of information and telecommunications services. The demand for such services has increased significantly with growing need for access to digital and online information—including e-government, continuing education and employment opportunities. Almost 73 percent of libraries report they are the ***only*** source of free access to computers and the Internet in their communities.
- Funding data indicate volatility in how libraries support this public technology access. Even libraries with historically stable funding are experiencing flat levels of local funding, and have reacted to this by shifting to soft funding sources (fees/fines, donations, grants, etc.) as a way to support public access computing services. Local government revenue and "other" (soft funding) account for nearly 90 percent of overall public library funding.[2]
- Staffing levels are not keeping pace with patron demand—both for those staff who provide training and other direct patron services, as well as for those staff who maintain the information technology infrastructure. Libraries cite the need for greater staff expertise and availability as a barrier to being able to support and manage public access technologies.
- An increase in the number of libraries reporting connection speeds greater than 769 kbps (up 11 percent from last year) is tempered by the vast majority of libraries (75 percent) who report their wireless and desktop computers share the same network, thus diminishing the effective speed of access to the Internet at the workstation. Further, libraries are not moving above the 1.5 Mbps speed as had been anticipated during 2006–2007.

1. Information about the reports from the 1994–2006 studies is available at http://www.ii.fsu.edu/plinternet.
2. National Center for Education Statistics. *Public Libraries in the United States: Fiscal Year 2005*. (NCES 2008–301). Washington, DC: NCES, 2007. http://nces.ed.gov/pubs2008/2008301.pdf.

- Public access Internet services (including homework resources, e-books, audio and video) grew dramatically over the past year. These resources provide far more options for library patrons to use inside the library and remotely from home, work and school, but also impact the library's public services and technology infrastructure.
- Many library buildings, inadequate in terms of space and infrastructure (e.g., wiring and cabling), cannot support additional public access computers and technology infrastructure.

The interconnectedness of funding, staffing, buildings and maintenance cannot be underestimated, as all have a direct impact on the amount and quality of public access technology services that public libraries can provide to their patrons.

KEY FINDINGS

For some library users and supporters, library technology is defined simply as a working computer on a desk with Internet access and a printer. Anyone working in a public library, however, knows that simple definition inadequately describes the range of technology infrastructure support needed to provide current public access computing. A range of issues detailed in this report require attention to maintain and improve technology access, and can be dangerous if ignored.

The last decade has seen steady growth in the integration of public access computing services within libraries. Public libraries provide an impressive array of services that are critical to the communities they serve, but the underlying support needed to maintain and improve these services has been lagging for many U.S. public libraries. As libraries introduce more computers and more robust technology-based services, keeping up with patron demand is an ongoing challenge.

Funding Remains Flat for Many Public Libraries

> **"Money is going to be tight. There'll be more pressure to do more with less as we've been doing."**

Between 2006–2007 and 2007–2008, overall budgets have remained level for most libraries. Although libraries experienced an average annual increase of 4 percent in operating funds from 1996–2005,[3] preliminary national data suggest decreases during fiscal year 2006 in both library expenditures and their distribution. Indications are that individual libraries have experienced a shifting of expenditures away from collections to other line items (e.g., technology, utilities, building maintenance).[4] Redistributing existing resources to other types of expenditures is not uncommon, especially with staffing expenses being the most inflexible of library expenditures. In a 2006 ALA study on funding,[5] libraries reported that when operating budgets decline, reductions in staff, services and collections follow this pattern, in priority of order of cuts:

1. Materials (average of 68.3 percent of libraries responding)
2. Staffing (average of 41.6 percent of libraries responding)
3. Hours open (average of 24.6 percent of libraries responding)
4. Electronic access (12.6 percent of libraries responding)

3. National Center for Education Statistics. *Public Libraries in the United States* (FY1996–2005). http://www.nces.ed.gov/pubsearch/getpubcats.asp?sid=041#. Note: Beginning in fall 2007, the Institute of Museum and Library Services (IMLS) began publishing the *Public Libraries in the United States* reports. Individual reports are now online at http://harvester.census.gov/imls/pubs/pls/index.asp.
4. Institute of Museum and Library Services. Compare Public Libraries, Fiscal Year 2006 [online search tool of public library data]. http://harvester.census.gov/imls/compare/index.asp.
5. American Library Association. Office for Research & Statistics. *Funding Issues in U.S. Public Libraries, Fiscal Years 2003–2006*. (2006). http://www.ala.org/ala/ors/reports/fundingissuesinuspls.pdf.

When scrutinized at a local level, expenditures varied much more than could be discerned at the national level. For instance, when comparing anticipated FY2007 operating expenditures reported in the 2006–2007 *Public Library Funding and Technology Access Study* (PLFTAS)[6] with actual expenditures in this year's study, it is apparent that projected expenditures were *not* realized. Overall operating expenditures fell short of anticipated levels by 15.5 percent, and varied by specific expenditure type from those anticipated by as much 20 percent:

- 20 percent below anticipated expenditures for salaries
- 0.8 percent below anticipated expenditures for collections
- 12.5 percent above anticipated expenditures for other expenditures

Libraries reported actual spending of about 58 percent of operating budgets on salaries in FY2007 and about 26 percent of the operating budget on "other" expenditures—building maintenance, technology, utilities, etc. In addition to the steady shift of expenditures away from collections to "other," it appears we may be starting to see a shift away from salaries to "other" expenditures, as well.

In this year's questionnaire to COSLA, a majority of state libraries reported level or modest increases in state funding for public libraries in FY2007, similar to previous years. Coupled with the 2006 ALA study on funding, such spending suggests that public libraries have been grappling with declining purchasing power since as early as 2003. State funding makes up about 10 percent of public library operating revenue. Half of state libraries estimated flat or 1–2 percent increases in *overall* funding for public libraries, and 28.6 percent estimated overall funding growth at 5–10 percent. The extent to which these gains can be sustained given the recent economic downturn remains unclear.

While the detailed financial data section of this study provides more in–depth information, it is important to note that a greater reliance on non-tax sources of funding and a larger proportion of expenditures shifting toward "other" line items and away from staff and collections expenditures are important trends to watch. These are key questions to track when the national public library data (Institute of Museum and Library Services) are reported for FY2007.

Staffing at a Standstill

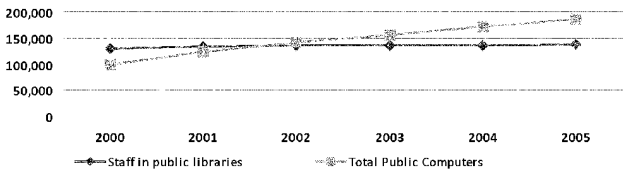
> **"The technology was brought in, and a whole new service created, without additional staff. It was just double the work for no more money, you know."**

Library staff members at all levels play vital intermediary roles in supporting, managing and maintaining public access to computers and the Internet. For first-time users, a computer is only as good as the library staff available to orient them—including how to use a mouse, how to open an email account and how to search the Internet effectively. In addition to the one-on-one assistance offered in all libraries, almost three-quarters of libraries (73.4 percent) offer information technology training for library patrons. More library staff report they are scheduling one-hour sessions with patrons to orient them to the broad range of skills necessary to do research, find jobs or apply for government assistance. Many librarians report that applying for jobs and government services are among the most staff-intensive patron Internet needs.

Another impact on front-line staff is evident in the high percentage of libraries reporting that managing time limits imposed on patron use of workstations has to be done manually. Close to half (45.9 percent) of all public libraries and 63.6 percent of rural libraries manage computer time limits with paper lists and taps on the shoulder. Not only is this labor intensive, but many library staff reported that it is the most stressful

6. *Libraries Connect Communities: Public Library Funding & Technology Access Study 2006–2007*. Chicago: American Library Association, 2007. http://www.ala.org/ala/ors/plftas/0607report.cfm.

Figure A1. Full-Time Public Library Staff versus Numbers of Computers, Nationally



Source: National Center for Education Statistics. *Public Libraries in the United States (fiscal years 2000–2005). http://nces.ed.gov/pubsearch/getpubcats.asp?sid=041#*

task that they perform. Libraries increasingly are turning to software solutions that allow users to reserve access to a computer and/or automatically cut off Internet sessions without staff intervention. While all library staff interviewed prefer this time management method, they agree that it adds a level of complexity to the computing environment, and implementation snags are common.

While the reported average is about 50 percent, some library staff, particularly those on library reference desks and in libraries that manually manage computer time limits, estimate that as much as 80 percent of their time is spent in any given day on technology-related tasks.

Beyond direct patron assistance and training, library technical staff develop technology plans and hardware replacement schedules; build and support integrated library systems for circulation, cataloging, online public access catalog, acquisitions and computer management; troubleshoot hardware, software and telecommunications networks; select, purchase and organize databases and other electronic resources for patron use; plan for and negotiate telecommunications networks; build and update library Web pages; raise awareness of new Internet services…and more.

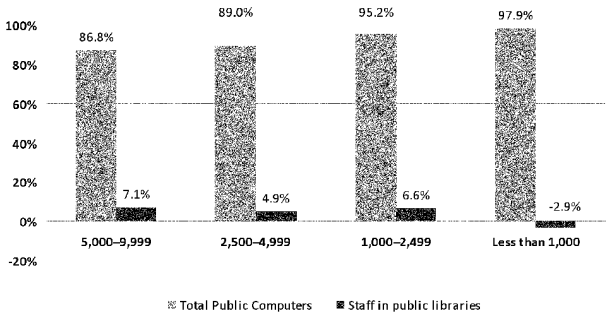
Like additional cars on the interstate, additional computers and Internet services in libraries contribute to the "traffic" and create additional demands for staff to orient patrons and mediate public access to these resources. Along with an 86 percent increase in the number of computers in U.S. public libraries, there was an 18.6 percent increase in library visits from 1.15 billion in 2000 to 1.36 billion in 2005. The number of full-time equivalent (FTE) staff grew only 6 percent over the same time period.[7]

When examined by population service size, the impact on the smallest public libraries (serving fewer than 10,000 residents) is even stronger. Libraries serving fewer than 1,000 residents saw the greatest percentage increase in the number of public computers (up 98 percent), along with a **decline** in the number of FTE staff (-3 percent).

Responding to an open-ended question about the three most significant challenges libraries face in maintaining their public access computers and Internet access, adequate staffing topped the list, closely followed by financial concerns and computer maintenance and management. These challenges included staff skill levels and training needs, availability of IT staff support and overall inadequate staff levels. Rural libraries (65.2 percent) were more likely to name the need for more staff as their top challenge, when compared with their suburban (60.5 percent) and urban (44.4 percent) counterparts.

7. National Center for Education Statistics. *Public Libraries in the United States* (FY2000–2005). http://www.nces.ed.gov/pubsearch/getpubcats.asp?sid=041#.

Figure A2. Percentage Change of Full-Time Public Library Staff verses Computers, 2000–2005, Under 10,000 in Service Area



Staff Training Needs Outpace Supply

> **"I really wish there was an easier way to get the technology and training. We teach ourselves, and we try to help each other. It should be easier."**

The impact on staff to support the increasing services is often expressed with frustration. There is a limited amount of time for staff to train themselves on the new technology-based services offered to the public, as well as the time to adequately support their patrons' needs for training and instruction.

With almost 60 percent of libraries staffed by fewer than five full-time staff members,[8] the difficulty of providing coverage for staff to receive training elsewhere is a challenge often compounded by long travel times for rural library staff. Scheduling time for in-library training is also complicated, especially when there is little overlap time in schedules for part-time and full-time staff.

In the questionnaire to COSLA, about 90 percent reported offering some formal training to public library staff in six categories that build skills in funding, public awareness and/or management of technology in libraries. Technology planning (34 percent) was most likely to be offered at least once a year, followed by advocacy/marketing (22 percent) and technology evaluation (19 percent).

IT Support Lags

> **"It comes down to me. I'm learning as I go. I've waited up to a week to get a computer hard drive fixed by county IT staff."**

The need for dedicated technology support staff was identified as one of three main themes that emerged from the 2006–2007 study, and this need continues unresolved, as evidenced by data collected during the

8. National Center for Education Statistics. *Public Libraries in the United States: Fiscal Year 2005*. (NCES 2008-301). Washington, DC: NCES, 2007. http://nces.ed.gov/pubs2008/2008301.pdf.

current study. In fact, for the first time, the 2007–2008 survey asked who provides information technology (IT) support (e.g., troubleshooting desktop issues, Internet connectivity, the library Web page) for the library. The three most common types of support reported were:

- Building-based staff, not trained as an IT specialist (39.6 percent)
- System-level IT staff (38.5 percent)
- Outside vendor or contractor (30 percent)

The disparities are once again pronounced between urban and rural libraries, however. Rural libraries are far more likely than urban libraries to depend on librarians or other library staff who are not trained in IT (44.1 percent) and on outside vendors (36.3 percent)—or even volunteers (14.4 percent)—to support their technology. Urban libraries are most likely to have system-level IT staff (76 percent).

One source of IT support for about 21 percent of urban libraries and 16 percent of suburban libraries—county/city IT staff—can be both a benefit and a challenge. Several library directors reported a clash between the library's mission of providing open access to computer and Internet resources for a wide range of users and user abilities, and the typical county/city IT approach that protects data and limits access, as would be more common in an office environment. One director reported this is an issue for ongoing education and discussion—including the decisions about when to schedule live updates on the city/county network, and what may be uploaded or downloaded via library computers. Additionally, many city/county IT departments are understaffed, and libraries are one of many agencies in need of technology support.

Another complicating factor for libraries working to hire and retain IT staff is the salary available to compensate these high-demand staff. In the general population, computer and information systems managers are compensated at an average of $101,580,[9] compared with $59,974 in a public library setting.[10] The 2007 average public library director salary is $77,200.[11]

Internet Access Speeds Bump Up, Fall Short

> **"Our IT department looked at our bandwidth (1.5Mbps) and found that at 2 p.m. in the afternoon, it was slower than dial-up, we had so many people using it."**

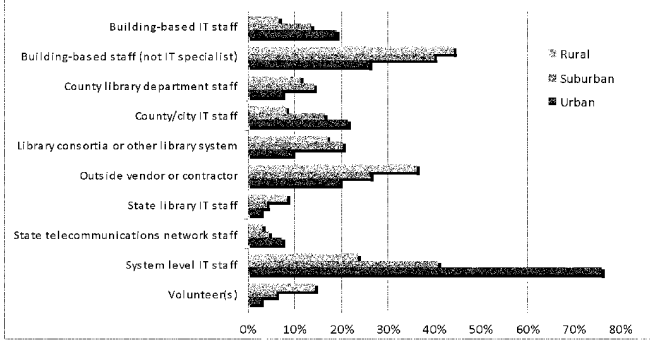
A positive development is that the number of libraries reporting connection speeds of 769 kbps or faster increased 11 percent since last year. More than half of urban libraries (51.6 percent), 42.1 percent of suburban and 32.1 percent of rural libraries now report offering a T1 connection. In the COSLA questionnaire, several state librarians suggested T1 should be the *minimum* level of connectivity for all libraries in their states. Although many libraries improved access by moving to T1 from lower speeds, there was a slight decline (about 3 percent) in the number of libraries reporting access speeds above 1.5 Mbps.

There also is evidence in the 2007–2008 study that more libraries have reached capacity in their technology infrastructure. Even with more libraries at T1 speeds, the percentage of libraries that report their connection speed is insufficient to meet patron demand some or all of the time is up about 5 percent over the 2006-2007 study. This may be attributed to shared connections between wireless and desktop computers (up 25 percent from last year), the broadband demands of online services and resources, and the continual use of library public access computers.

About 17 percent of libraries reporting in 2007-2008 had plans to increase access speeds in the coming year, up about 3 percent from the 2006-2007 study. Slightly more libraries reported that they were at their maximum connection speed available (17.1 percent compared with 16.6 percent last year), or were unable to afford additional bandwidth (21.2 percent compared with 18.1 percent last year). Proportionally, all libraries

9. U.S. Bureau of Labor Statistics. *Occupational Outlook Handbook*. 2008–09 edition.
10. American Library Association-Allied Professional Association. *ALA-APA Salary Survey 2007: A Survey of Public and Academic Library Positions Requiring an ALA-Accredited Master's Degree. Chicago: American Library Association. 2007.*
11. Ibid.

Figure A3. Public Library Outlets IT Support Sources By Metropolitan Status



(rural, suburban and urban) considered the cost of increasing access speeds to be a barrier hindering upgrades, but rural libraries (24.8 percent) disproportionately reported that they are at the maximum level of connectivity.

Although funding is a strong indicator of growth and sustainability when providing computer-based services for the public, the overall quality of these services depends heavily both on access speeds and on the adequacy of hardware—having enough computers as well as the age of those computers.

This year's study revealed that the age range for library computers in use is quite broad; libraries in all types of communities are keeping computers older than four years in use to support patron demand. When asked about key factors affecting the replacement of public access computers, 89.6 percent of libraries reported cost and 33.1 percent reported maintenance and general upkeep issues as factors. Clearly, the impact of reliance on soft funding and insufficient IT staff are recognized as growing barriers to supporting ongoing public technology access.

Internet Services Show Double-Digit Growth

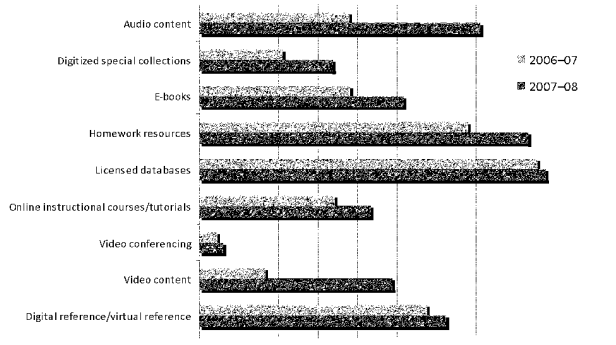
"We're not being used less; we're being used differently."

In addition to the hardware and software offered in every U.S. public library building, most libraries have created increasingly robust virtual collections of online resources via their Web sites and online catalogs. This year's survey found that nearly every category of public Internet service offered in U.S. public libraries increased—sometimes dramatically—from the 2006–2007 study.

The survey indicated double-digit growth in the availability of a range of resources in five key online services:

- Audio content increased 33 percent (from 38 to 71 percent).
- Video content is up 32 percent (from 16.6 to 48.9 percent).
- Homework resources grew 15 percent (from 68.1 to 83.4 percent).

Figure A4. Public Library Services Available to Users by 2007 and 2008



- E-book availability increased 13.5 percent (from 38.3 to 51.8 percent).
- Digitized special collections increased by almost 13 percent (from 21.1 to 33.8 percent).

Licensed databases to support education (like *World Book* and test preparation materials), business (like *Standard and Poor's*) and life interests (such as genealogy) are still the most commonly provided Internet-based services—available in 98 percent of urban libraries, 93 percent of suburban libraries and 80 percent of rural libraries.

Also of interest is that these online services grew in libraries of ***all*** sizes. Urban libraries—which generally benefit from greater Internet access speeds, dedicated technology budgets and dedicated IT staff—lead in every category of online services. But their rural counterparts reported the greatest percentage growth in offering homework resources (up 15 percent) and audio content (up 34 percent). Suburban libraries, too, increased all online services and led their counterparts in the percentage growth of online instructional courses/tutorials provision (up 13 percent).

Library staff rank the top two uses of public Internet service that are as critical to their community: education for K-12 students (78.7 percent); and job-seeking services (62.2 percent). In fact, these responses increased significantly in both categories since last year. The third most critical use is providing access to government information (55.6 percent), which has now grown larger than the service categories for providing education resources and databases for adults/continuing education services (46.9 percent) or computer and Internet skills training (37.6 percent).

In addition to providing these informational and lifelong learning resources, libraries also provide peripheral device support to library patrons. The 2007–2008 study asked about these devices for the first time and found that public libraries allow users to access and store content on USB storage devices (e.g., flash drives, portable drives) or other devices (72 percent), make use of digital camera connection and

manipulation (37.4 percent) and burn CDs/DVDs (34.7 percent).

The results and effects of these increases in online public library services are manifold. The good news is that library users who visit the library in person or virtually via its Web site have more access to more resources—many of which are unavailable or too expensive to purchase at the individual consumer level. The tradeoff is that these services often come at the expense of reduced Internet speeds, funding for other library resources and higher expectations by patrons for library staff assistance in using these resources.

Buildings and Infrastructure Further Stretched

> **"Our headquarters library is twenty years old this year, and it was built with no provision for Internet access."**

This year also marked the first increase in the number of new computers in libraries since 2002.[12] The average number of public access computers increased by 1.3 per library in 2007–2008. Urban libraries gained the most—2.7 more, now averaging 21 per library. Suburban libraries reported modest gains, adding about one computer per library and now averaging nearly 14 computers per library outlet. Rural libraries gained the least, adding only about 0.4 computers, averaging about 7.5 computers per library in 2007–2008.

For the second year, libraries reported space issues and challenges in maintaining an adequate supply of building-based electrical and IT wiring to support technology-based services. More than three-quarters of libraries (77.7 percent) reported that space limitations are a key factor when considering adding public access computers. Another 36.4 percent reported the lack of availability of electrical outlets, cabling or other infrastructure as a barrier—up from 31.2 percent in 2006–2007.

Although purchasing equipment and basic building maintenance may be paid from annual operating sources, significant building improvements are typically made from capital revenue sources. Fewer than 50 percent of public libraries benefit from capital revenue sources and most receive less than $10,000—an inadequate amount when rewiring or significant cabling is required to increase technology-based services.[13] A majority of library buildings are 25 to 50 years old, and 40 percent of library buildings are estimated to be in fair or poor condition.[14]

To respond to these challenges, many libraries have added wireless to support patrons bringing their own computers to the library or to support laptop check-out for in-library users. Libraries also reported the growing need for staff training in implementing wireless, as they continue to dedicate desktop computers to patron use, and rely on wireless laptops for training or the demonstration of new Internet services.

During site visits, a number of library directors indicated there was high demand for more workstations and wireless connectivity at their libraries. But, for the reasons noted above, such was unlikely to occur. Moreover, obtaining more workstations or wireless connectivity might only exacerbate the strain of providing technology training to users and staff, and could put even more pressure on the library's budget to purchase additional software and other resources for the workstations, as well as require additional funds to address workstation maintenance issues.

Fifty-six percent of libraries have no plans to add computers in the coming year. This, together with the issues of insufficiency of bandwidth access, ongoing challenges to fund staff support for IT and the inadequacy of building capacity and technology infrastructure, suggest the growing strain that libraries face to keep up with user demand for public access computing.

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12. Bertot, J. C. and C. R. McClure. Information Use Management and Policy Institute, Florida State University. *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services.* (2002). http://www.ii.fsu.edu/plinternet_reports.cfm.
13. National Center for Education Statistics. *Public Libraries in the United States: Fiscal Year 2005.* (NCES 2008-301). Washington, DC: NCES, 2007. http://nces.ed.gov/pubs2008/2008301.pdf.
14. Chief Officers of State Libraries Agencies (COSLA), Legislative Committee, National Construction Survey. 2007. Prepared by the New Jersey State Library for COSLA.

CALL TO ACTION

There must be a greater awareness of the challenging issues facing public libraries and a renewed focus on sustainable solutions that improve the quality—as well as the quantity—of public technology access in U.S. public libraries.

Millions of people throughout the United States depend upon libraries for their access to online educational opportunities, job-seeking assistance, e-government interactions, and help in using information resources. Almost 73 percent of libraries report they are the ***only*** source of free access to computers and the Internet in their communities.

This study also revealed that public libraries indicate that their workstations are in near constant use. Although wireless access is available in almost two-thirds of libraries, there are also increased levels of service and resource demands for e-government, digital content and a range of other patron services that impose a greater load and impact on available bandwidth.

Public library advocates must focus on specific areas needing urgent attention:

- Public libraries need stable and sustainable funding for technology services. Libraries currently are shifting expenditures to cover technology costs and/or relying on "soft" (non-tax) support to fund technology. In doing so, libraries mask the impacts of funding cuts and increased operating costs—sometimes until they are literally forced to close their doors.
- Librarians and policymakers must re-think federal and state support to public libraries. Only a small portion of public library funding (0.5 percent) comes from the federal government, yet public libraries have important social roles and responsibilities to American society and overall quality of life. New strategies for national support to public libraries should be developed.
- The public library community needs to develop new models for deploying and managing technology. In addition to participating in library networks, cooperatives and consortia that leverage shared resources, libraries need to develop strategies to work with other community organizations to promote additional public access technologies. Collaboration with educational organizations, such as public schools and community colleges, other local community groups and private sector firms may produce ideas and strategies that can integrate with, extend and/or enhance public library networked services. Such collaborations can be an important component of the library's advocacy strategy, alleviate pressure on the public library as the sole provider of public access and create a more robust community-wide public access infrastructure.
- Investing in additional public library staff and staff training activities are investments in technology. The one-on-one and formal trainings offered in libraries are essential for many patrons, and for many, this is the only avenue for them to learn how to successfully use Internet-based resources for work, school and life interests. Increasingly complex networked environments also demand dedicated IT staffing.

These are only some of the most important areas where public library advocates should focus their attention. Additional suggestions and possible strategies are discussed elsewhere in this report.

[“School Libraries Work!” Research Foundation paper, updated 2008, may be accessed at the following Internet address:]

http://librarypublishing.scholastic.com/content/stores/LibraryStore/pages/images/SLW3—2008.pdf

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[Whereupon, at 11:00 a.m., the subcommittee was adjourned.]

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