Museums that run preschools or elementary schools often have more than just physical walls separating these operations. Museums and schools have vastly different schedules, revenue streams, licensing requirements, and staffing issues. Often the school is seen as a “program of” the umbrella museum operation. But what if the organization’s learning approach were the umbrella—and the museum, school, and professional development initiatives were all considered laboratories for developing and disseminating that learning approach? Portland Children’s Museum is moving in that direction.

For children’s museums considering a preschool and/or elementary school, here are some of our lessons learned.

▼ Be clear on your intent
Portland Children’s Museum was founded in 1946 as a program of Portland Parks and Recreation. Its first home was an 1861 mansion, followed by a 1918 nurses’ dormitory, which the museum quickly outgrew. In 2001, Rotary Club of Portland raised $10 million to move the museum to the former home of Oregon Museum of Science and Industry, a mid-century brick building left empty when OMSI relocated to a much larger facility.

Although the old science center was far from glamorous, the children’s museum felt it had landed in paradise—with far more room, generous parking, and the verdant surroundings of Washington Park. The museum separated from Portland Parks and became its own private nonprofit. Parks remained the museum’s landlord as owner of the building—offering a generous thirty-year lease for $10, baseline utilities, and modest capital repairs.

In the same period as the museum’s 2001 move, two other events converged: Oregon passed legislation allowing the formation of charter schools, and educator Judy Graves returned from a trip to the preschools of Reggio Emilia in Italy, determined to start her own school inspired by the Reggio approach. All she needed was space, of which the children’s museum suddenly had an abundance. Judy and museum director Verne Stanford collaborated to co-locate the children’s museum and new charter school,
be both based on playful learning. Opal School opened its doors to its first class of students in September 2001 as a museum program.

Thus Portland Children’s Museum and Opal School “fell into place” under the unexpected constellation of real estate, Oregon law, and an inspiring trip to Italy. This fortunate coincidence sparked the children’s museum/school relationship that has evolved, somewhat through trial and error, over the past seventeen years. We now run a tuition-based, private beginning school for thirty-seven preschoolers, and a public charter elementary school for eighty-eight students grades K-5. We have recently seen our inaugural students graduate from college.

A children’s museum considering a school today has the benefit of learning from the experience of organizations like Portland Children’s Museum and Opal School. Is the intent of a new school mission-driven, or is it the prospect of an additional revenue stream? If the latter, think carefully, because there may be bumps in the road ahead.

▼ Be aware of cultural and operational differences.

While on the surface, a children’s museum and preschool or elementary school seem like a natural fit, there are significant cultural and operational differences that can be mitigated with careful planning. Advance agreements can help alleviate tension later on. Consider:

- **Security:** While museums certainly need to be security conscious, it’s not easy to run a public school in a public place. Stakes are high when adults (often not the same ones every day) drop off and pick up students, sometimes using the same entrance and hallways as the general public.
- **Schedules:** Museums tend to be year-round attractions open six to seven days/week. Schools generally run on an academic year, and school days are shorter than museum days. In-house custodial and maintenance staff need to be able to flow with the varying workload, or outsource services to accommodate demand.
- **Space:** Museum galleries are noisy. On school days, the classrooms require concentration and a buffer—including from sounds of children playing on the floor above! Over the course of the year, empty classrooms are tempting real estate for summer camps, but classrooms require maintenance, and teachers need to return to their workspace before camp sessions are over.
- **Staffing:** Museums staff work year-round and are busiest on holidays, while teachers get summers and holidays off. Museum and teacher salaries may be set to different market benchmarks. Retirement plans are different for a private nonprofit vs. public school. In addition, working in different parts of the facility means that maintaining overall staff unity can be a challenge.

Opal School students, along with museum visitors, Native American children at a nearby preschool, and other diverse community members, have contributed to the development of the new exhibit Drip City. Opal students explored the concept of watershed, took a field trip to the source of Portland’s water, and diagrammed their understanding in drawings, such as the one below, which will become part of the final exhibit.

In a photo shown on the front page, Opal students help create a new exhibit called The Market. Illustrating the relationship between land and food, the result includes a grape arbor, apple tree, beehive, and chicken coop, which students drew out as a full-size floor plan in our exhibits staging area.
The Children’s Museum Preschool at The Children’s Museum of Indianapolis opened in fall 2010. Now in its ninth year, many foundations of the program—project-based learning, object-based learning, and the belief that young children are capable learners—are unchanged despite other major evolutions. The preschool is heavily influenced by both the Reggio Emilia and Montessori philosophies.

In the Reggio Emilia philosophy, the environment is viewed as the third teacher (the first is the parent, and the second is a child’s team of teachers). The museum’s inviting and beautiful classroom environment is marked by large windows that bring in natural light and provide a view into the museum’s urban neighborhood. The rooms are furnished with natural wood pieces and decorated with students’ work and museum artifacts. The Reggio approach nurtures a child’s cognitive development through a focus on movement, language, artwork, building and constructing, play, music, and experimentation.

The preschool is also inspired by Dr. Maria Montessori, with a focus on the prepared environment, the view that students are capable and interested in learning, the role of the teacher as an observer and guide, and the value of modeling grace and courtesy in our world today.

In keeping with the museum’s family learning framework, the preschool hosts Family Learning events throughout the year. These events include activities designed to encourage parents and preschoolers to work together as they explore topics such as collections, reading, STEM, and cultural diversity using museum exhibits and resources. The teachers develop a new curriculum each year that fulfills state academic standards for preschool, addresses the needs and interest of their students, and incorporates new museum exhibits. Taking cues from their students’ interests, teachers identify topics to explore in deeper ways using the resources in both their classroom and the museum to develop corresponding learning experiences. Past projects have focused on maps, stores, money, and zoos.

Daily exhibit visits inspire curiosity through immersive and experiential learning on a huge variety of topics across the arts, sciences, and humanities. Inside the three dedicated preschool classrooms, students move through “center activities.” These activities are creatively designed to meet Indiana’s Early Learning Foundations, focusing on curricular areas such as math, writing, literacy, science, sensory, and art. Students also have hour-long “Free Choice” work cycles, which encourage them to explore the room’s ever-changing materials. Students choose whether to practice fine motor skills at the manipulative shelf (filled with activities for eye-hand coordination), role-play a story in dramatic play, create masterpieces at the art cart, or design and build a tower in block play. All of these learning experiences empower children to be authors, inventors, artists, scientists, and mathematicians!

The program has always served children ages three to five, usually in mixed-age classrooms. For the first few years of operation, the preschool followed a standard model of a Monday/Wednesday/Friday option and a Tuesday/Thursday option, from 8:45 a.m. to noon, September through May. In 2014, two of the three classrooms changed their M/W/F programming to a pre-kindergarten format, specifically for four-year-olds, that runs from 8:45 a.m. to 2:30 p.m. Fall 2018 marks the first year that one of the classrooms is operating full time (8:30 a.m. to 5:30 p.m.) Monday through Friday, year-round. The other two classrooms continue to provide Pre-K on M/W/F and half days on T/Th.

The preschool currently has a capacity of ninety students and carries a tuition in line with other high-quality private preschools in Indianapolis. Each classroom is staffed by a teacher and an instructional assistant; parent volunteers are also present on a daily basis. The preschool has a dedicated playground constructed in 2013. In 2018, the preschool became fully licensed by the state of Indiana.

Value of Preschool in a Museum

Although a project-based learning approach can be implemented in any preschool, the resources available onsite are what make the learning opportunities in a museum so extraordinary.

Each class starts the day with a thirty-minute exhibit visit before the museum opens to the public. Whether the current interest is an iconic artifact, exhibit feature, student-driven project, or department within the museum, the teacher uses museum resources to deepen and broaden student understanding of the topic. It is common for classes to visit the same exhibit more than once throughout the school year, but each visit provides a different learning experience. One day students could be in Dinopshere’s dig site holding real fossils borrowed from the natural science collection. The next time they visit Dinopshere, they might meet with our electricians to learn how light is project onto the exhibit’s domed ceiling to simu-
Hand to Hand    Association of Children's Museums

On the preschool’s annual parent survey, 50 to 60 percent of parents routinely cite “museum resources” as a top strength of the program. As three parents wrote:

• Peripheral things that are fantastic for learning such as the food court, museum store, security dept, paint shop. There’s so much to learn and it’s all right there.

Theat er performances! Real scientists. I can go on and on. Basically, all these things would be a field trip for any other school.

• Other schools take a field trip once a year to the [children’s museum], but our child gets to experience it two times a week! The whole preschool program is so well put together and executed, I feel proud and excited that my child gets to attend school there.

• The greatest strength is the access to the exhibits. I am thrilled that my daughter gets to learn about things like hieroglyphics and paleontology in preschool.

The museum building itself provides late daytime, nighttime, or a thunderstorm.

The museum’s curators collaborate with the preschool teachers to provide artifacts from the museum’s teaching collection that complement the current topic. Each classroom has a display case that features a new artifact each month. But students also get to handle collections objects (with teacher supervision) and learn from objects using multiple senses. The museum’s world cultures collection provides particularly rich object interactions. Teachers also use museum artifacts in observational drawing exercises, which challenge students to translate the shapes and details they observe in an object onto paper in a systematic way. These exercises help promote early literacy skills.

The museum building itself provides endless learning opportunities, from doing experiments on the four-story ramp, to learning about the public address system, to observing the outside world from the skywalk. But probably the richest resource is the staff itself. Preschool students don’t just learn about dinosaurs; they get to talk with real paleontologists. If they become interested in stores, they visit the museum store and meet the staff who decide what to sell there. When learning about health and safety, they speak with a member of the security team who is also a firefighter. From exhibit designers, to interpretation staff, to curators, painters, and even food court staff, the wide variety of knowledge and expertise among the museum’s staff adds to the unique and authentic learning experiences in the preschool.

Finally, preschool students, “experts” in their own right, contribute to the development of museum exhibits. Exhibit developers routinely prototype exhibits with the students. For example, they may want to make sure a particular activity is physically possible for a young child to manipulate (a frequent question when developing our new sports-focused experiences). Alternately, they may want to test whether a preschooler can understand the concept. (Recently a developer brought Greek alphabet blocks for the preschoolers to play with because she wants to use them in our upcoming exhibit on modern Greek culture, Take Me There: Greece.)

Program Evolution

The recent major changes to The Children’s Museum preschool were driven by the desire to scale up at least one of the classes from a half day to a full day. The Indiana State Legislature has debated launching a universal PreK initiative several times in the last five years, and that provided further initiative to operate full-time. Many incremental steps were made to move toward this goal. First, an optional “Lunch Bunch” was added, which helped staff understand the needs related to students eating a meal on-site. Next, the Pre-K programs were added, which extended hours further and met parent desires for preparing their children for kindergarten both academically and socially. When Pre-K was added, staff also adopted the Bracken Basic Concept Scale, a standardized early childhood assessment, which is administered to each student in the fall and the spring. Teachers use the findings to identify students who would benefit from specialized instruction, and parents appreciate understanding the level of knowledge their child is demonstrating relative to their age.

There were two additional challenges to clear before the program could expand to full-time: licensing and the year-round conundrum. Licensing requirements necessitated many changes including; purchasing additional equipment (e.g., napping cots), negotiating lunch provisions with the museum’s food vendor, infrastructure changes (e.g., automatic locks on hallway doors, sinks), and changes to daily processes and protocols. These changes were tackled over a two-year period.

The tensions in moving to a year-round program were identified through surveying current preschool parents and general museum members on the format of preschool/childcare they needed and preferred. This process revealed that families who have one parent at home do not want full-time childcare and are fine having a summer break from school. But families without a parent at home need childcare all day, five days per week, year-round. The challenge for our program was that during summer break, the preschool rooms are used by the museum’s popular summer camp, which has served neighborhood children for over thirty years. Extending the preschool’s operation over the summer would take space away from the summer camp in a building where space was already at a premium. Eventually an alternate location for one summer camp class was identified and thus opened the possibility of maintaining one preschool classroom year-round. This was deemed the best outcome because survey data told us that we would be appealing to a different set of families with a full-time classroom. As with other changes, starting with one full-time classroom, rather than changing the entire school’s format, has allowed the staff to navigate the major differences in caring for children nine hours per day, as opposed to four, on a smaller scale.

Looking Forward

After finally achieving two major goals in 2018 (state licensure and expansion of one full-time, year-round class), the preschool is currently focusing on demonstrating that the full-time, year-round classroom operates at the same level of quality as the well-established part-time programs. Scaling up from part-time to full-time presents some challenges. Another goal is to secure permanent funding for scholarships that cover the majority of tuition cost. This support will increase the racial and economic diversity of the student body and ensure that lower-income families living in the neighborhood surrounding the museum can also take advantage of the excellent early childhood education available in their backyard. Although many parents would like our future goals to

continues on page 17
The Origins of ELLI

Shortly after Stepping Stones Museum for Children opened in March 2000, museum founder Marjorie Priebe approached team members about starting an onsite preschool for the young children of museum employees. It was an interesting idea, but with so much to do just to get Stepping Stones up and running, it wasn’t the right time to add “one more thing.” With other daycare centers and nursery schools operating within a mile of the museum, we reasoned we could perhaps establish partnerships with them in the future.

In November 2010, Stepping Stones completed an expansion that doubled its size. The addition included a multimedia gallery, classroom/lab space, and a separate entrance, with the intent of hosting programs and events outside the museum’s core operating hours. Soon after, Stepping Stones hosted a workshop, led by Literacy How founder and president Margie Gillis and her staff, to help pre-kindergarten teachers improve their approach to teaching language and literacy skills development. Established in 2009 and building on work done at Yale University’s Haskins Laboratories, Literacy How specializes in translating reading research into practice at all levels. Its mission is to empower teachers with knowledge to ensure that every child learns to read by third grade; their methodology is centered on oral language, the foundation for learning to read. Stepping Stones’ mission is to broaden and enrich the educational opportunities for children and families and enhance their understanding of the world. This was a perfect match.

This successful workshop opened a broader discussion between the two organizations about quality early childhood education, or lack thereof, and the role that children’s museums can take to create optimal learning opportunities for children. For many children, what begins as an opportunity gap results in an achievement gap, the difference in educational performance between children from low-income households and their peers in moderate-to-high-income households. Connecticut’s achievement gap, shaped by disparities in income levels, language, vocabulary, background knowledge, and opportunity, is one of the largest in the country. Stepping Stones and Literacy How decided to work together to help close that gap.

Stepping Stones and Literacy How are also part of Norwalk ACTS, a collective impact initiative comprised of more than 100 local organizations and individuals whose mission is to enrich and improve educational opportunities—cradle to career—for Norwalk children. At the start of this effort in 2005, half of Norwalk’s children were not prepared to enter kindergarten each year. In 2011, Stepping Stones and Literacy How formed a steering committee of Norwalk ACTS members, including the local school district, community college, housing authority, and the City of Norwalk, to map community assets in early childhood education, determine gaps, and identify opportunities. As a result, the Early Language and Literacy Initiative℠ (ELLI) was formed. The ELLI Lab School at Stepping Stones opened in December 2012, cementing a longstanding and prolific partnership between Stepping Stones and Literacy How.

Why Not a Preschool?

Rhonda Kiest and Cristina Matos, Stepping Stones Museum for Children, and Margie Gillis, Literacy How

Today, ELLI offers a comprehensive approach to early childhood education designed to advance the cognitive, physical, and social-emotional development of young children, improve school readiness, and reduce the achievement gap. ELLI programs are deeply rooted in the latest research and evidence-based practices related to all domains of literacy, language, and early childhood development required for a child to become literate and prepared to achieve in kindergarten and throughout the learning continuum.

The ELLI Lab School at Stepping Stones currently operates year-round, serving twenty-eight children ages eighteen months through five years. Additional ELLI classrooms are located in three Norwalk elementary schools, serving fifty-six children ages three to five on a school calendar schedule. Finally, the year-round ELLI at Fairfield University in Fairfield, Connecticut, serves forty children ages twelve weeks through five years. Additionally, ELLI provides professional development for pre-kindergarten teachers at an elementary school in Bridgeport, Connecticut, that serves thirty-six children ages three to five. ELLI also supports quality summer learning experiences for up to 200 children entering kindergarten with little to no pre-kindergarten experience through Camp ELLI, and approximately 1,450 children in kindergarten to fifth grade who participate in the Norwalk Summer Academy.

With the exception of the ELLI at Fairfield University, which is fully tuition-based with some discounts for staff, admission and tuition for other ELLI programs are determined according to Connecticut’s School Readiness Initiative regulations. These regulations specify that 60 percent of the children enrolled must be from families whose income is at or below 75 percent of the state median income.
Dr. Sharon Shaffer was the founding director of the Smithsonian Early Enrichment Center (SEEC), a model lab school in Washington, DC, which she led from 1988 to 2012. In recognition of her pioneering work establishing a signature program of learning, she received the Secretary’s Gold Medal for Exceptional Service from the Smithsonian—the only educator with this distinction—in 1998.

As an independent consultant for early learning in museums, Shaffer now works closely with a wide range of museums and shares her belief in the power of objects and her passion for teaching art, history, and culture through art and artifacts. Her interdisciplinary approach to learning bridges formal and informal learning environments.

For more than ten years, Shaffer has been an instructor for education at the Curry School of Education at the University of Virginia, and has published numerous articles in journals in the United States and abroad. In spring 2012 she served as the guest editor for the Journal of Museum Education’s “Early Learning: A National Conversation” Issue. Her first book, Engaging Young Children in Museums (2015), offers an historical and theoretical framework for early learning experiences in classrooms and museums. You could tap into the Smithsonian for anything you wanted to do with children.

VERGERONT: How did you migrate from early learning to early learning in museums?

SHAFFER: I started as a classroom teacher teaching kindergarten, first, and second grade, and then preschool when my own children were that age. I fell in love with preschool and discovered a passion for that age group. My family moved from Pennsylvania, where I was the director of a community college lab school, to the Washington, DC, area just after I finished my master’s degree in early childhood education. My advisor said, “Look up the Smithsonian. They’re starting a lab school there.” At the time, they were doing a national search for an executive director so I applied and got the job.

VERGERONT: What was new and exciting about the museum setting?

SHAFFER: My work at the community college showed me that there were many exciting experiential learning opportunities for children beyond the classroom. The Smithsonian Institution offered a very different—and diverse—set of resources, from types of museums, to the exhibits in them, to the sculpture and gardens outside of the museums, and has been translated into Chinese. Her newest book, Object Lessons and Early Learning (2018), explores the power of objects in learning, children’s curiosity about their world, and the natural affinity for collecting that begins in the early years.

Shaffer currently serves as a senior advisor to the Children’s Museum Research Center, an affiliate institute of China Philanthropy Research Institute at Beijing Normal University. In this capacity, Shaffer has conducted several training workshops with educators at two new children’s museums, Laoniu Children’s Discovery Museum in Beijing and the Hohhot Laoniu Children’s Discovery Museum in Hohhot.

Jeanne Vergeront of Vergeront Museum Planning has worked since 1997 with museums, science centers, libraries, and community organizations starting up, expanding, or rethinking their futures to increase their value to their communities. Vergeront was a founder of the Madison Children’s Museum and later served as vice president of exhibits and education at Minnesota Children’s Museum from 1986 to 1996. Her blog Museum Notes passes along ideas, perspectives, and resources to connect museum thinkers and practitioners.

VERGERONT: How did the SEEC model develop?

SHAFFER: From the start, it was almost a blank slate. I was grounded in early childhood practice, so that was the foundation on which SEEC was built, guided by questions such as “What do we know about how children learn, and how can we use that information and established standards for early childhood education?” The 1985 launch of NAEYC accreditation provided standards to guide our program’s development. I was a strong believer in experiential learning and the work of John Dewey—hands on and minds on. I also liked Vygotsky’s ideas about socially mediated learning—not teacher-directed, but child-centered with teachers as facilitators.

VERGERONT: Where did the idea for a preschool at the Smithsonian come from?

SHAFFER: The idea started in the late 1970s with the Women’s Council, a special interest group focused on women’s issues that included family-friendly experiences for the people who worked at the Institution. Unfortunately, their initial ideas related to childcare did not gain traction no matter how many times they presented the proposal. At some point one of the board members said, “I think that we need to approach this in a different way. We need to consider how the Smithsonian thinks about itself as a place of learning, as an opportunity for the country.” So they recreated the proposal to establish a national model in museum-based education for young children while creating a model preschool/lab school in which their children could enroll.

VERGERONT: What was new and exciting about the museum setting?

SHAFFER: My work at the community college showed me that there were many exciting experiential learning opportunities for children beyond the classroom. The Smithsonian Institution offered a very different—and diverse—set of resources, from types of museums, to the exhibitions in them, to the sculpture and gardens outside of the museums. You could tap into the Smithsonian for anything you wanted to do with children.

VERGERONT: Were other museum preschools operating at the time?

SHAFFER: When I was hired to create this national model of museum-based education for young children, the SEEC board qualified it, saying, “We really don’t know exactly what it looks like because no one else is doing exactly what we’re thinking about.” Smithsonian staff were not aware of early learning programs going on in other places, but certainly it was atypical to have preschoolers or young children in traditional museums.

VERGERONT: How did the SEEC model develop?
In addition, I focused on SEEC as a museum-based preschool. What are the unique qualities of a museum, and how do they play into our philosophy and practice in the preschool? How does access to objects and collections support inquiry-based learning? That thinking was the starting point, and those ideas have not changed. We started with project-based learning, and we focused on diversity, using the work of Louise Derman-Sparks, author of the Anti-Bias Curriculum.

Even though most of us weren’t aware of what was happening in other museum preschools, we weren’t working in isolation. I hired wonderful staff who worked together, contributing ideas, thinking about what strategies would work in galleries, and how we could bring those strategies into our classrooms. We learned from an amazing and diverse group of parents, most of whom worked in museums, as well as Smithsonian content experts. National Museum of the American Indian staff families, for example, shared ideas from their traditions, informing our approach to those experiences in our classrooms.

VERGERONT: How did your ideas evolve over time? On Day 1 when you opened the preschool, for example, how developed was the object-based learning approach?

SHAFFER: When I started in July 1988, the SEEC facility was under construction within the National Museum of American History. We opened three months later with a focus on high quality early childhood education. We wanted SEEC teachers to be caring, attentive, engaging educators responsive to children’s needs. We also wanted them to have a knowledge base, so we hired people with a minimum of a bachelor’s degree in early childhood education. Although I had done a lot of project-based work before coming to the Smithsonian, object-based learning, as we now know it, was not in my background. In the first few years, I learned a lot from my Smithsonian colleagues, many of whom were parents and museum educators. Gail Durbin’s teacher’s guide, Learning from Objects, helped me understand object-based learning. I also learned from other museum educators, ultimately building my own understanding of object-based learning with young children and what strategies engage them in museum galleries.

VERGERONT: In addition to teachers, were other people involved in the program?

SHAFFER: Every Smithsonian museum, including the National Museum of Natural History, the National Museum of American History, the Hirshhorn Museum and Sculpture Garden, and others, has its own education department, so there’s a wide range of educators in the Institution. The parent group was also critical because so many—but not all—of our preschool students were children of Smithsonian employees. The parents were truly one of the greatest assets for our program; they had so much to offer and were eager to work with us.

It took a little more time to engage other museum professionals. In 1988 and well into the 1990s, there was a great deal of skepticism among many museum staff about the value of having young children in the galleries. They just didn’t think that young children were sophisticated enough to learn anything there. It wasn’t until the brain research findings emerged in the mid-’90s that people started to think differently about young children. As museum staff witnessed young children in the museums, they saw the complex thinking that was involved in how kids construct ideas. It changed how they viewed children and possibilities for learning in the galleries.

VERGERONT: When you were at SEEC, how often did classes visit the galleries, and what did a typical visit look like?

SHAFFER: Frequency depended on the age group, but visits always related to whatever ideas and themes they were exploring in their classroom. For example, if they were talking about families, they would go to the Hirshhorn Museum and Sculpture Garden to see a Picasso sculpture of a mamma pushing a baby carriage, and talk about it. Or if they were talking about resting and reading books about how everybody rests, they would go to the African Art Museum to see an African headrest, making connections between the familiar and the unfamiliar.

The three- and four-year-olds visited museum galleries almost daily. One of the benefits of being in the Smithsonian community right there on the Mall is that it only took a few minutes to walk from one museum to another. Kids would sit down in a gallery and the teacher would read a story. The teacher would also bring a basket filled with objects related to the story and the gallery, which the kids could interact with. A class could spend anywhere from twenty to forty minutes there, depending on the kids, what they were doing, and the level of active engagement. We did not expect children to sit quietly and be typical museum visitors. We focused on active, engaged learning in the museum connected to what they were learning in their classrooms. Learning is like putting a puzzle together; each experience is one piece of the puzzle.

VERGERONT: Besides access to the Smithsonian museums, which are a phenomenal resource, in what other ways is SEEC different from other preschools or museum preschools?

SHAFFER: SEEC is distinctive in the methodology used to engage children in thinking about their world. Even without the opportunity to visit one of those wonderful galleries, the preschool used objects in real, authentic ways to help children make sense of their world. Every object—in a museum or not—tells a story. Objects are very complex, with multiple layers and points of entry. We use them to stimulate children’s thoughts and further provoke what they’re doing in the classroom. Teachers and children bring objects into the classroom—and not museum collection objects, but their own things—and students use them to create collections related to the curriculum. Children develop exhibitions. They understand what it means to be a collector, and why you would choose certain objects to be part of the collection.

For many children, SEEC was an introduction to museums, even though many of them had parents working at the Smithsonian. Interestingly, parents reported that their children became tour guides in the galleries when relatives were in town, so a love for museums developed naturally through SEEC and the family.

VERGERONT: Do you think that objects in a museum preschool environment are different from objects in other preschool environments?

SHAFFER: Yes, at SEEC there is an emphasis on real objects rather than toys or replicas of real-world objects (although the classrooms also have more typical preschool toys). The school has a teaching collection with objects like an African headrest, musical instruments from international cultures, or ostrich eggs and feathers. Teachers and children also bring in unique objects and gather specimens from nature.

There’s a real difference between an object that is used as a prop and an authentic
Inquiry is an invitation to think and have a conversation, and this is what we want children to do. That’s a very different learning process than just saying, “Look, this is a feather” and putting the prop down.

**VERGERONT:** Some materials like feathers or clay or wire are found in many preschools and museum preschools. What’s the distinction between a prop and an authentic object? This is important for museums to understand, not only in their preschools, but among the objects in their exhibits.

**SHAFFER:** The *African Voices* exhibit at Smithsonian’s National Museum of Natural History includes “galimotos,” children’s toys made from found objects and recycled materials. Karen Lynn Williams’ book *Galimoto* features people in Malawi who make these toys. When SEEC children visit that gallery and see the galimotos, they make the connection between objects used to make them and those same objects in our world, from Coca Cola cans to colored wire. Children are inspired by real artifacts, and use similar materials for their own creative purposes.

It’s unrealistic to think you can use authentic objects all the time. Teaching objects or props are used over and over in early childhood programs. Especially in children’s museums, they must be accessible and durable. But there’s a difference in thinking about object-based learning that requires an authentic object. Museum preschools have a distinct advantage of proximity to a wealth of these objects.

**VERGERONT:** From a child development perspective, what is it about objects that is so fundamental to children’s understanding of their world?

**SHAFFER:** I just published a book, *Object Lessons and Early Learning*, which contains chapters about young children and their curiosity about—and connection to—real things. We know it is important for young children to have toys to play with, and yet a young child will always gravitate toward mom’s real keys over Fisher-Price play keys. They go right for the real remote control over a toy one. Children are curious about the real world and they pursue that curiosity through exploration and discovery. They use all of their senses, including taste (putting things in their mouth sometimes that we wish they wouldn’t), but they’re active learners, intrinsically motivated to want to know.

**VERGERONT:** Play is also a strategy for exploration and learning in preschool programs. How does play fit with object-based learning?

**SHAFFER:** Good early childhood programs offer varied types of experiences, because different children thrive in different ways. But all children benefit from play. Sometimes there’s an intersection between play and the object. For example, there’s an outdoor sculpture at the Hirshhorn Museum by the artist Barry Flanagan. Called *The Drummer*, it’s a very thin, eight-foot-tall hare who is marching and playing a drum. Teachers take the children to see it when they’re exploring musical instruments or the concept of real and pretend, asking, “What do you notice happening here?” Children might say, “It’s a rabbit.” And they follow up with “A real one?” “Oh, no, it’s not real.” “Well, why not? What can you tell me about it?”

The children’s interpretation of what they see builds on prior knowledge. They understand that a real rabbit couldn’t do what this rabbit is doing, but they can still imagine a rabbit marching along and leading a parade. After considering the sculpture, teachers bring out a collection of instruments, and the children get a chance to pretend to be in a parade and play their instruments. And they invite other pretend animals to join in. It is a playful interaction.

**VERGERONT:** What were SEEC classrooms like when you started?

**SHAFFER:** Like any good early childhood environment, they featured hands-on exploratory areas, but they had collections on display, complete with labels. At the time, I didn’t know much about Reggio, but as I learned more about it, specifically the documentation aspect, I realized that’s what we were doing. SEEC classrooms were like mini-museums.

We looked at art from two perspectives—expressive and receptive—much like educators think about language development, which has an expressive component and a receptive component. Expressive art making is traditional in early childhood settings where children express their ideas and feelings through hands-on experiences with paint, clay, and other media. The receptive side of an art experience involves looking at, thinking about, talking about, and interpreting what they see. Walls in every single SEEC classroom, even for babies and toddlers, were filled with art prints, mostly inexpensive reproductions from the National Gallery of Art. These prints related to what we were talking about in class. That was not typical of the average early childhood classroom.

We never felt like we had enough space inside, but we had outdoor playgrounds and time spent in the classroom was a very limited part of the day. Morning meetings or circle times could be held anywhere in the museum because it didn’t open until 10:00 a.m. Preschool children could be sitting in the Natural History Museum looking up at Henry the Elephant while listening to a story about elephants. In bad weather, we had multiple galleries in which to play. Follow the Leader. Of course, we had to maintain a level of respect in the museums, but that doesn’t prohibit us from really nice, interactive experiences.

There are hands-on spaces in the Smithsonian as well, now and in the past. At the National Museum of American History (NMAH), Wegman’s Wonderland is a relatively new space for children ages zero to five and Q?rius jr.: a Discovery Room at National Museum of Natural History is open for hands-on exploration for younger children (with another version for people of all ages). The entire Smithsonian campus is a SEEC classroom. In the past, our children planted...
topiaries and butterfly gardens with horticulturists at the Smithsonian Institution and visited the U.S. Botanic Garden. They helped plant a victory garden at NMAH, learning directly from entomologists and other scientists. SEEC children actively engaged in learning well beyond the classroom with a level of authenticity you can’t capture anywhere else.

VERGERONT: Many of the parents who enrolled their children in SEEC worked at the Smithsonian. Aside from convenient childcare, what were they looking for in a preschool?

SHAFER: Whether the parent was an educator, security guard, museum clerk, or lawyer, across the board they valued education. Our parents wanted opportunities for their children to learn, explore, and grow intellectually, cognitively. They also were interested in diversity because The Smithsonian is a very diverse cultural community.

VERGERONT: As SEEC children graduated and moved on to elementary school, how are they viewed? What has SEEC’s reputation been among other area preschools?

SHAFER: Our children have gone on to every kind of school possible—public, parochial, and private. Any preschool develops a reputation for how it supports children’s learning. We were already colleagues with other people in the community’s early childhood field, but because we were at The Smithsonian, we also offered professional development. In 1995 we developed our first major seminar, Learning through Objects: Museums and Young Children, in response to educators wanting to know more about our practices and how to implement similar strategies in their preschools.

VERGERONT: Are there other ways in which area teachers are able to benefit from SEEC’s experience?

SHAFER: SEEC connects with many communities, local and beyond, and partners with other organizations such as the Early Childhood Division of the DC Public Schools around a shared belief in diversity. SEEC, sponsored anti-bias leader Louise Derman-Sparks to speak, and set up a day for us all to benefit from her knowledge. SEEC also has internships from the George Washington University Museum Education Program and other university programs. It shares its work by writing articles for NAEYC and other publications and by attending or presenting at conferences, such as ACM’s InterActivity. It conducts workshops on play, on creating collections in the classroom. It does public programs for parents and children in the community.

VERGERONT: Other tuition-based museum preschools face issues of inclusion, cultural diversity, and financial sustainability. How does SEEC address this balance?

SHAFER: There are many layers to this challenge. The first is how SEEC supports families who don’t have the same financial resources that others do. The original SEEC board of directors set up a scholarship fund, with money from the different units of the museums, to allow all staff families, including lower wage earners, to participate. In some cases, the scholarship covered up to 75 percent of tuition, and the families paid the remaining 25 percent. Looking across the different early childhood programs in the Washington area, SEEC fees were right in the middle, even though our student/teacher ratios were better and the required teaching credentials were higher.

VERGERONT: From a programmatic point of view, in terms of how children’s mobility or sensory limitations might affect going to museums or managing objects, how has SEEC been able to be inclusive?

SHAFER: SEEC’s goal is to be fully inclusive, as long as we are able to meet the needs of the child. SEEC uses a weighted lottery for admission—we do not select one child over another or exclude anyone for developmental or physical differences. With an interest in keeping families together, SEEC gives siblings a first-tier priority, then fills additional openings in each age group from the Smithsonian applicant pool, then Federal, then general public. The competition is fierce for the youngest slots, but by the preschool classes, the enrollment often includes children outside of the Smithsonian family. When any child’s name is drawn, we talk with the parents to make sure that we are able to meet the child’s needs. We make accommodations as much as possible, but it is only fair to a child and their family if we are able to meet their needs successfully. I don’t ever remember turning a child down for enrollment based on special needs, but I do remember instances when it became apparent over time that the special needs of a child enrolled in the program required a different setting. This arose primarily among children with autism or severe language delays. In some cases, we worked with the parents to find other resources. Some children went off for more focused support and then came back to SEEC. One little girl, who came from another country, spoke no English, and also had some cognitive impairments went to a specialized school for two years and returned to SEEC for kindergarten. We also worked with outside resources for children who needed speech therapy or OT during the school day, partnering with parents to ensure appropriate resources for supporting children’s growth.

VERGERONT: What do you think the long-term benefits are for children who attend a museum preschool? Have there been any follow-up studies on museum preschoolers’ later success?

SHAFER: While there were efforts to collect data on SEEC graduates, most of my knowledge is anecdotal. What I heard more than anything was how well prepared their children were for future schooling experiences. They were confident learners who had been exposed to many different ideas. They knew how to ask questions, and how to think critically. They had rich language skills and always had something to contribute to any discussions. Learning is not a list to check off, but a broadening of horizons and a different way of thinking about the world.

VERGERONT: How does a museum preschool help a museum accomplish what it couldn’t otherwise accomplish?

SHAFER: I have great respect for traditional museum educators, but many of them have a limited understanding of how children learn. And yet much of the audience that traditional museums now serve

Museum preschools offer a different kind of learning experience and different ways to think about how you can enrich children’s lives. There are wonderful opportunities that can develop in a museum/school relationship that not only enrich the museum and the school, but also the children and families we all serve.

VERGERONT: Many of the parents who enrolled their children in SEEC worked at the Smithsonian. Aside from convenient childcare, what were they looking for in a preschool?
n 1986, Mindy and Esther Shrago had a vision to start an educational community program. They wanted to engage children and families through artistic, interactive experiences that inspire creativity and encourage an understanding of the world. This program began as a museum without walls, but in 1989, they opened a children’s art museum, Young At Art Museum (YAA). Envisioned as “the first art museum experience for children—nurturing the child from birth through teens and into adulthood,” YAA describes itself as a “no-fail, arts-based learning environment that will transform the way children embrace the arts, become tomorrow’s patrons of the arts, and develop into future advocates and supporters of the arts.” YAA galleries focus on art history, the environment, recycling, and culture. In addition to studio art classes and workshops, the museum invites well-known, contemporary artists to exhibit or create installations of new work.

As its audience expanded, YAA outgrew its first home. In May 2012, Young At Art Museum moved to a 55,000-square-foot, Gold LEED-certified building, shared with the Broward County Library, and opened a museum preschool. Building on YAA’s intensely arts-based museum environment for children and families, the preschool follows the same arts-based learning approach.

For Executive Director/CEO Mindy Shrago, the preschool was also inspired by economist/social scientist Richard Florida’s concept of developing a “creative class” as a key driver of future economic development. In a 2013 article in the Sun Sentinel, Shrago stated, “It’s critically important to start with early childhood because we are raising a creative class. They really are sponges at that age and absorb all art can do while integrating it in the curriculum.”

While not a charter school, the licensed YAA Museum Preschool features a curriculum developed by preschool director Toni Doku that includes museum exploration, library visits, professional artists’ workshops, and student art showcases. This art- and literacy-focused academic curriculum prepares children for kindergarten. Daily programs promote natural curiosity and creativity through play in a safe and stimulating museum environment. Preschool teachers guide children in activities designed to build skills, confidence, imagination, and encourage socialization.

Immersing children in both the museum and library experiences allows them to soak up everything both institutions have to offer. The preschool instills art into the earliest stages of development when children build foundations for learning language, math, problem-solving, social, and other skills that establish the basis for lifelong learning.

The YAA Preschool includes two classrooms, one for three-year-olds (up to fifteen students) and one for four-year-olds (up to twenty-two students), each with two teachers. Both classrooms are securely situated in the building and are only accessible to preschool staff and security. Preschool bathrooms are designed for young children and are not shared with the public. The second classroom occupies a space formerly used on weekdays for other museum workshops. Preschool staff and museum educators developed a shared use schedule so that both preschool classrooms are available for other museum programs when the preschool is not in session.

The preschool operates from 8:30 a.m. to 3:00 p.m., Monday through Friday, following the same school year calendar as the Broward County Public Schools. Aftercare is offered from 3:00 to 6:00 p.m. for an additional fee. Most parents pack snacks or lunches, but preschool students may also purchase food from the museum café.

YAA Museum Preschool welcomes students eligible for Florida’s Voluntary Pre-kindergarten Education Program (VPK), a subsidized prekindergarten program for four- and five-year-olds. VPK funding covers three hours of academic-based preschool education in any preschool in the state (exact funding amounts vary by county). VPK morning or afternoon classes are available Monday through Friday, also following the county school calendar. Before and aftercare are available for additional fees. Because the VPK program requires students to focus on specific school readiness skills, VPK students are taught as a distinct group in the mornings; VPK students who attend in the afternoons are usually part of blended preschool classes along with other students.

A team of artists and early childhood educators worked together to design the YAA preschool classrooms, in character with a museum devoted to children’s art experiences. They carefully selected colorful cabinets, walls, and floors, along with plenty of shelves to display artwork, to make the rooms artful environments. Children use real artist equipment, such as easels, and many different types of nontoxic art materials, such as pastels, water colors, acrylic paint, and ceramicist-quality clay usually found in artists’ studios. Classrooms are also equipped with...
items typically found in any preschool, such as blocks, books, and puzzles.

The children start their day in a colorful playground designed by installation artists Felici Asteinza and Joey Fillastre, known as MILAGROS Collective, funded through a KaBOOM! Play Everywhere grant. Next, they move into the classrooms featuring plenty of windows and tables designed to maximize creativity and later venture into the exhibits to extend their learning.

**Art-Centered Preschool Curriculum**

Art offers children many opportunities to improve their problem-solving and communication skills. In the creative process, children learn perseverance, and build confidence. The YAA Museum Preschool curriculum and programs adhere to Florida's Early Learning and Development Standards for three- and four-year-olds, organized into five domains, each incorporated into an art platform.

To understand how one artist can be a source for many different kinds of learning, consider how Georgia O’Keeffe inspired multiple lessons as September’s featured artist for the four-year-old program. O’Keeffe is known for painting massive abstract flowers. Classroom activities and the learning environment included objects featured in her art. Teachers used geometric shapes to help students understand how to draw flowers, while at the same time supporting their mathematical thinking skills. The class talked about New Mexico, where Georgia O’Keeffe lived and worked (social studies). Students worked on a collaborative project to make an adobe house (social and emotional skills development). Center time became a setting for a flower shop where children use dramatic play to talk about imaginary flower purchases (language and communication skills). During story time, children listened to *The Tiny Seed* by Eric Carle (emergent literacy skills). Later, they conducted science experiments with seeds, using fine motor skills to plant seeds while touching on concepts of environmental responsibility. They built a greenhouse using blocks (motor development). Creating artwork in O’Keeffe’s style, children used real art materials to paint an abstract flower on canvas. Finally, their classroom was converted into an art gallery displaying all of the students’ paintings. And all of this began with a focus on one artist, Georgia O’Keeffe.

While a typical preschool classroom has about eight learning centers (drama, blocks, math, science, computers, art, reading, and writing), YAA preschool expands beyond the classroom into the 55,000-square-foot museum. Museum exhibits such as ArtScapes focuses on art history, CultureScapes introduces cultures from around the world, and GreenScapes inspires kids to reduce, reuse, and recycle through art. YAA’s exhibit and education teams work together to create the galleries and activities for children of all ages. Each multi-layered area supports the preschool curriculum in language arts, math, social studies, music, and more.

Teachers continually stress the connections between what children are learning in the curriculum and what’s happening in the exhibits. A letter scavenger hunt takes place in the WonderScapes, an exhibit based on the classic story *Alice’s Adventures in Wonderland*. Children play math games such as mancala in CultureScapes, an exhibit that includes an authentically recreated traditional African hut.

**Unique Advantages of a Museum Preschool**

In addition to the museum’s exhibits, YAA hosts numerous guest artists and special events throughout the year. Preschool students are frequent collaborators often contributing to shaping the ultimate museum experience for everyone. For example, when the museum develops a new exhibit, the preschool students go behind the scenes to check out the exhibit modules and activities prior to the public opening. The exhibit team observes how children interact with the new exhibit to help fix problems before the opening event. The museum’s school program team also tests a tour with our preschoolers to see if the information and activities fit their interests. The museum’s marketing team takes photos of the children playing in the new gallery to post on social media. (Parent releases are obtained at the beginning of the school year.)

Each November, the YAA Art Institute invites guest artists to introduce elements of art and design and engage in age-appropriate art-making experiences with children, teens, and adults. This 7,500-square-foot wing of the museum features art studios for ceramics, digital art and film, darkroom photography, drawing, painting, printmaking, and mixed media. Preschoolers eagerly collaborate with guest artists, such as a recent Native American ceramic artist who invited preschoolers into the pottery studio to make clay pots.

At the end of the school year, the preschool sponsors an Art Showcase for parents and museum staff that features projects about each of the sixteen artists studied that year. The children dress up like famous artists, such as Picasso or Frida Kahlo, and proudly point to artwork adorning the walls.

**Preschool Value to Families and to the Museum**

The parents of our preschool students comment positively about their kids’ daily connections to art. They appreciate that their children learn about different types of art, the people who pioneered the art forms, and the places where they lived. Parents note that their children seem to enjoy learning. Most parents enroll because they visited the museum or learned about the program from another parent; they pick this program because of their love of the arts. Every year, parents ask if the program could expand to include an elementary school.

The preschool program contributes to the overall finances of the museum. Comparing straight preschool income versus operational expenses, it just breaks even. However, the benefits of forty families visiting weekly, becoming museum members, participating in other fee-based programs, and generally spreading the word makes an even bigger impact on our financial operations and the vibrancy of the museum.

Yumina Myers is director of education and Toni Doku is the preschool director at Young At Art Museum in Davie, Florida.
Why a Museum Preschool?

You’ve heard it many times from many sources: early childhood education is paramount to building a strong foundation for learning later in life. The research is sound: most brain development (specifically, the connections of neurons) takes place between birth and five years of age. At the Family Museum in Bettendorf, Iowa, we continually ask the question, how can a children’s museum play a role in this critical part of a child’s development?

Like many children’s museums, our target demographic is families with children ages eight and under. As part of our regular programming, we have offered comprehensive Early Learning preschool classes for three- and four-year-olds for more than twenty years. The preschool program began as eight-week-long, science- and art-based classes and soon developed into yearlong programs due to the sheer support of parents and the community.

There is a continuous need for preschool classes that focus on whole-child learning, not just academics. The museum’s Early Learning programs feature science, art, creative movement, music, and kindness. Our preschool teachers, museum educators who also teach in other museum programs, provide opportunities for open-ended learning, often straying from the scheduled curriculum. Making a spider hat is not just about the hat, but it becomes a science and math activity. Lessons learned can include: Spiders are not insects. How many legs, eyes, and body parts do they have? How many spiders can we find outside? Do you like spiders? Sometimes students are scared of spiders, so this presents an opportunity to talk about feelings and emotions. In any lesson, we expand on whatever excites the kids and what they want to know. The more interest they have, the more learning takes place. This philosophy is shared by the museum as well as its Early Learning programs.

Age-Appropriate Programs

Our program for three-year-olds takes place in two classrooms, each with twelve children and two educators, twice a week for two hours. Classes focus on social-emotional learning, problem-solving, following directions, gaining independence skills, as well as common preschool activities such as recognizing letters, counting numbers up to ten, and learning to write first names. Educators encourage students to solve their own problems, and try not to step in, unless necessary. For example, when children argue over a toy and ask the teacher for help, the educator’s response is to ask the children what they think they should do. Together they come up with options that may or may not work. These problem-solving, inquiry-based learning skills are crucial to how they approach situations later in life and ultimately increase executive function skills.

The program also focuses on empathy—paying attention to other people’s feelings and how to react to them. Students are encouraged to talk about what makes them angry or frustrated. They are taught to “read faces,” to help determine how their friends are feeling. It is extremely important for children to learn how others may react in certain situations. Unfortunately today, many young children are not exposed to real-time social cues. Too much screen time and not enough face-to-face time can lead to difficulties with socialization and learning through social play. We help young children learn about each other and build perspective by encouraging them to ask each other questions and communicate using kind words. When children’s social and emotional needs are met, they are more likely to pay attention and learn more academically.

Our program for four-year-olds happens in two classrooms, each with one educator and ten students, meeting three times a week for two and a half hours. Small class sizes are essential for getting to know the children, gaining their trust, and ensuring a safe, caring environment in which to learn. In the four-year-old program, we dig deeper into problem-solving, exploring the world through science and art, and once again stressing the importance of kindness. Last year we implemented the Kindness Curriculum created by the Center for Healthy Minds at the University of Wisconsin-Madison. The children have “Kind Time” once a week for thirty minutes, during which they learn how to be mindful, express their feelings appropriately, and have empathy and care for others who are feeling sad or angry. The curriculum also focuses on patience. In this world of instant gratification and the expectation of immediate responses, parents report observing their children using these skills outside of class—looking for moments to be kind to others and practicing patience when waiting in line at the grocery store.

Music and movement are key components for both programs. Each Friday, a museum educator introduces the four-year-old class to basic music comprehension. The educator has obtained certification for Kindermusik, a well-known international music education program, through an online course. Kindermusik offers a wide array of programs for infants to seven-year-olds. We use Kindermusik’s ABC Music & Me, a program specifically designed for preschool settings. Museum preschool families love having Kindermusik as part of the curriculum so they do not have to pay additional fees to take separate outside classes.

The three- and four-year-old classes also work on science, art, and movement skills. Learning how their bodies move in space, they practice galloping, skipping, hopping, and using their imagination to move with music. Basic science experiments involve observations and prediction charts. When outcomes are not what the class predicted, children think about why, thus implementing more executive function training. All
children explore various art mediums such as clay, watercolor, and acrylic; the four-year-old classes also study artists such as Georgia O’Keeffe, Jackson Pollock, and Piet Mondrian. A four-year-old can comprehend an amazing amount of art-related knowledge, details, and vocabulary!

**Sustainability, Staffing, and Structure**

Due to growing competition, we continually monitor our viability. In addition to free voluntary preschool offered by the state of Iowa since 2007, parents have an increasing amount of preschool choices. Family Museum programs fall in the mid to upper price range compared to other local programs. Our thirty-four-week program for three-year-olds costs $1,408 ($41 per week, or about $10 per hour). We enroll twenty-four children per year, with revenue totaling $33,792. The four-year-old program, also thirty-four weeks/year, is $2,650 ($78 per week, or $10 per hour). We enroll twenty children per year, with annual revenue totaling $53,000. While both classes often have waiting lists, we have learned not to exceed capacity in order to keep the quality of the program intact. Several local preschools enroll high numbers of students, but small class size is an important deciding factor for many families. While our fees are not the most inexpensive, the quality and content of our programs are still relevant in our community. Many parents discover the museum preschool programs through our newsletter, from families who have children in our classes, or by simply by visiting the museum often with their children.

Early Learning museum educators include two licensed teachers and others who have degrees in areas such as music education, art, or science. Museum educators are not required to be licensed teachers; we prefer to have staff with both formal and informal learning experience to provide a well-rounded environment. The museum provides educators with regular trainings to advance their professional development, including CPR, AED, and Ellen Galinsky’s early learning program, Mind in the Making. Staff are encouraged to try new things, take cues from the children’s interests, and step outside the boundaries of typical learning environments and formal strategies. Our Early Learning programs are informed by the Mississippi Bend Area Education Agency, an Iowa state agency that supports school districts and preschools through professional development, screenings, evaluations, and parent and educator resources. We also collaborate with other local agencies such as Head Start and Genesis Pediatric Therapy Center to provide parenting classes and workshops, which are open to any parent who visits the museum.

In addition to the preschool programs detailed above, we offer add-on experiences strategically scheduled so that programs can be combined into longer museum learning days. For example, families can opt to take an hour-long preschool Spanish class twice a week that takes place right before preschool and is taught by one of our educators, a native Spanish speaker. Kids learn basic Spanish vocabulary and songs and are introduced to the cultures of different Spanish-speaking countries. A second add-on, Literally Yours, is offered twice a week to four-year-olds who stay for lunch and recess and attend this class in the afternoon. This pre-reading program focuses on beginning sounds, parts of a book, and reading comprehension. This combination extends their day, allowing them to build up stamina in preparation for kindergarten. Finally, as a result of feedback from local kindergarten teachers, who continue to see incoming kids struggle with math, a math-readiness program is also available twice a week. Add-on classes cost approximately $10 per hour, roughly $75-$100 per month depending on the class length and how many times it is offered per week.

**A Preschool Benefits Not Just the Children, but the Museum**

The Family Museum’s Early Learning programs are popular with families, but they have also enhanced the museum in many ways. On weekday mornings during the school year, hundreds of families with toddlers come to our drop-in playtime and music classes. These classes are purposely programmed for children eighteen to thirty-six months, when older children are in school, and are filled with first-time parents exchanging advice. Families become aware of our Early Learning programs and many of them enroll their toddlers because their family feels comfortable here. Since our museum educators not only teach the Early Learning programs, but also other classes, such as drop-ins and summer camps, many families interact with and trust them.

Ultimately, it’s one big family here—which is especially fitting because we’re named the Family Museum! Although preschool students spend the majority of their time in dedicated classrooms, the rich museum environment offers opportunities lacking in most other preschools. Kids visit the museum clay studio to create holiday presents for their parents, and sometimes educators take the classes onto the exhibit floor to extend the learning with hands-on play experiences. Playgroups form, and parents, caregivers, grandparents all get together at the museum with their preschool program children and play in the exhibits before and after classes. Lifelong friendships form at the museum, which serves as a community convener and a safe, positive place for children to learn and for parents and caregivers to meet.

**Conclusion**

The mission of the Family Museum is to inspire, connect, and strengthen our community by enriching the lives of our children today, and expanding their capacity to shape their future. The goal of our Early Learning programs is to introduce children to a wide variety of experiences and to broaden their scope of learning through art, science, and exploratory play. Children thrive in environments where there is trust, safety, creativity, and the ability to learn through informal science- and art-based experiences. Children should be allowed the freedom to make decisions, problem solve, make mistakes, and gain perspective. The Family Museum—through its exhibits, programs, and preschools—is a platform for engagement. Children leave our program with a strong foundation of independence, confidence, kindness, trust, and an eagerness to learn new things.

---

“Molly hopped in the car after her first day of kindergarten, touched her nose to my nose and said (loudly), ‘TODAY WAS AWESOME!’ Molly is ready and so happy to be in school because of ALL of you! I just wanted to thank you all for taking such great care of my girls, for being so patient and loving with my most precious things!”

— testimonial from a parent whose two children attended all of our Early Learning Programs.

Kim Kidwell has been the director at the Family Museum for four years. Previously, she was the manager of learning experiences and environments, and a museum educator. Before entering the museum world, Kim worked as an educator in the Bettendorf Public School system in early childhood special education classrooms. Kim is also a certified Mind in the Making, a program that teaches executive function skills to parents, teachers, and community members.
Planting the Seed: Children’s Museums and Museum Preschools Emerge in China

Loretta Yajima, Hawaii Children’s Discovery Center and

Ni Zhang, Children’s Museum Research Center, China Philanthropy Research Institute, Beijing Normal University

Children’s Museums for China

In the fall of 2011, on his way from Washington DC, to his home in Inner Mongolia, Chinese businessman and philanthropist Niu Gensheng visited the Hawaii Children’s Discovery Center in Honolulu. Impressed with it and the vision and energy of his host, museum founder Loretta Yajima, he was inspired to open a children’s museum in his home city of Hohhot and to bring a Western-based concept of early learning to China.

Although Niu’s early impressions of the Hawaii Children’s Discovery Center formed his model of what a children’s museum could be for young Chinese children, Yajima suggested that he visit other children’s museums to get an idea of the many possibilities in the field. His plan was ambitious: revolutionize the Chinese concept of early education. As he said to Yajima over dinner one night, “I want to build a hundred children’s museums in a hundred cities in China. Will you help me? Together we can start an educational revolution in China!”

agreeing to become involved, Niu requested that Yajima lead their group of Chinese foundation and government officials on the tour of U.S. museums. During that tour, she convinced this group of influential decision-makers to collaborate and persuaded the Deputy Mayor of Hohhot to provide the land for the project in Inner Mongolia.

In order to get support from Chinese philanthropists and early childhood professionals, the Lao Niu Foundation established the Children’s Museum Research Center (CMRC) in 2013 within the China Philanthropic Research Institute at Beijing Normal University. The mission of CMRC is to promote children’s museum education in China; Yajima became its senior advisor.

The first museum, the Lao Niu Children’s Discovery Museum, opened on June 1, 2015 on a site in the China National Children’s Center, Beijing. A second museum, a 750,000-square-foot-complex called Hohhot Lao Niu Children’s Discovery Museum, started with a soft opening in June 2018. Since then, both pilot children’s museums have been extremely popular among children and families and have attracted study groups from all over the China.

A Children’s Museum and a Preschool

Education of children and young people is extremely important to the Chinese people. Government-owned institutions, known as Children’s Palaces, are prevalent and provide mostly afterschool activities including art programs, sports, science programs, etc. The Children’s Palace at the China National Children’s Center (CNCC), the site of the first children’s museum in Beijing, is the national model for Children’s Palaces.

After the U.S. children’s museum tour, the deputy mayor of Hohhot offered the city’s old Children’s Palace as a location for a children’s museum, following the Palace’s move to a new location. The site consisted of three independent but connected buildings. The initial plan was to renovate these old buildings for the new children’s museum. After Yajima visited the site with a colleague, an architect from Hawaii, it became clear that renovating the old buildings would be a major undertaking.

Soon after, Boston-based architects C7A were hired to work on both renovating the buildings and designing new exhibits for a children’s museum. They suggested turning one of the buildings into a preschool. Representatives from both the foundation and the government thought it was a great idea to develop a children’s museum-based curriculum in that preschool. It was hoped that this exemplary museum preschool could then become a model in Hohhot and throughout China. At the same time, revenue from the preschool could support the operating expenses of the museum.

Unfortunately, the government soon discovered the buildings were not in good enough condition to safely house a museum or a preschool. Plus, there was no parking. They decided to tear down all of the old buildings and rebuild the complex with the addition of two levels of underground parking.

In addition to the strategic recognition of unused but initially appealing space, creating a preschool was driven by need. There are not enough preschools in Hohhot. Because officials knew a preschool was a necessity to the city, the idea of adding one was retained even after the Hohhot government decided to tear down the old buildings and wholly redesign the complex. When completed, this project will eventually become the first children’s museum in China with a preschool on its campus.

At this stage of early childhood education transformation in China, the museum preschool will play a leading role in Hohhot’s local educational reform process. The learning value of unstructured play is not yet widely recognized by preschool teachers, parents, or caregivers.

Left, a rendering of the design for the Hohhot Lao Niu Children’s Discovery Museum. The preschool will be located in the three buildings on the left, with easy access to the museum on the right. The exhibit Inner Mongolia, above right, is part of the museum, which staged a soft opening in June 2018.

Children’s Museums and Museum Preschools Emerge in China

Loretta Yajima, Hawaii Children’s Discovery Center and

Ni Zhang, Children’s Museum Research Center, China Philanthropy Research Institute, Beijing Normal University

Children’s Museums for China

In the fall of 2011, on his way from Washington DC, to his home in Inner Mongolia, Chinese businessman and philanthropist Niu Gensheng visited the Hawaii Children’s Discovery Center in Honolulu. Impressed with it and the vision and energy of his host, museum founder Loretta Yajima, he was inspired to open a children’s museum in his home city of Hohhot and to bring a Western-based concept of early learning to China.

Although Niu’s early impressions of the Hawaii Children’s Discovery Center formed his model of what a children’s museum could be for young Chinese children, Yajima suggested that he visit other children’s museums to get an idea of the many possibilities in the field. His plan was ambitious: revolutionize the Chinese concept of early education. As he said to Yajima over dinner one night, “I want to build a hundred children’s museums in a hundred cities in China. Will you help me? Together we can start an educational revolution in China!”

Agreeing to become involved, Niu requested that Yajima lead their group of Chinese foundation and government officials on the tour of U.S. museums. During that tour, she convinced this group of influential decision-makers to collaborate and persuaded the Deputy Mayor of Hohhot to provide the land for the project in Inner Mongolia.

In order to get support from Chinese philanthropists and early childhood professionals, the Lao Niu Foundation established the Children’s Museum Research Center (CMRC) in 2013 within the China Philanthropic Research Institute at Beijing Normal University. The mission of CMRC is to promote children’s museum education in China; Yajima became its senior advisor.

The first museum, the Lao Niu Children’s Discovery Museum, opened on June 1, 2015 on a site in the China National Children’s Center, Beijing. A second museum, a 750,000-square-foot-complex called Hohhot Lao Niu Children’s Discovery Museum, started with a soft opening in June 2018. Since then, both pilot children’s museums have been extremely popular among children and families and have attracted study groups from all over the China.

A Children’s Museum and a Preschool

Education of children and young people is extremely important to the Chinese people. Government-owned institutions, known as Children’s Palaces, are prevalent and provide mostly afterschool activities including art programs, sports, science programs, etc. The Children’s Palace at the China National Children’s Center (CNCC), the site of the first children’s museum in Beijing, is the national model for Children’s Palaces.

After the U.S. children’s museum tour, the deputy mayor of Hohhot offered the city’s old Children’s Palace as a location for a children’s museum, following the Palace’s move to a new location. The site consisted of three independent but connected buildings. The initial plan was to renovate these old buildings for the new children’s museum. After Yajima visited the site with a colleague, an architect from Hawaii, it became clear that renovating the old buildings would be a major undertaking.

Soon after, Boston-based architects C7A were hired to work on both renovating the buildings and designing new exhibits for a children’s museum. They suggested turning one of the buildings into a preschool. Representatives from both the foundation and the government thought it was a great idea to develop a children’s museum-based curriculum in that preschool. It was hoped that this exemplary museum preschool could then become a model in Hohhot and throughout China. At the same time, revenue from the preschool could support the operating expenses of the museum.

Unfortunately, the government soon discovered the buildings were not in good enough condition to safely house a museum or a preschool. Plus, there was no parking. They decided to tear down all of the old buildings and rebuild the complex with the addition of two levels of underground parking.

In addition to the strategic recognition of unused but initially appealing space, creating a preschool was driven by need. There are not enough preschools in Hohhot. Because officials knew a preschool was a necessity to the city, the idea of adding one was retained even after the Hohhot government decided to tear down the old buildings and wholly redesign the complex. When completed, this project will eventually become the first children’s museum in China with a preschool on its campus.

At this stage of early childhood education transformation in China, the museum preschool will play a leading role in Hohhot’s local educational reform process. The learning value of unstructured play is not yet widely recognized by preschool teachers, parents, or caregivers.
In contrast, Beijing’s CNCC had a preschool with a well-established curriculum in operation for more than thirty years before the Lao Niu Children’s Discovery Museum opened. The children’s museum was built in donated space on the same large campus where the preschool, which is not affiliated to the museum, operates. The campus also houses other government-run afterschool and weekend activities and programs similar to what takes place in other Children’s Palaces throughout China.

Preschool Education Evolves in China

In 2001, China issued a trial-basis Guidelines for Kindergarten Education influenced by Western theories and ideas. However, because preschool teachers in China have used teacher-centered practices for a long time, there were—and still are—significant gaps between progressive ideas and the teachers’ daily practices (Qi & Melhuish 2017).

In 2010, the Chinese government issued the Compendium for China’s Mid- and Long-Term Education Reform and Development (2010-2020) with the goal of providing 95 percent of Chinese children at least one year of quality preschool education by the year 2020. This policy boosted preschool development in China. The enrollment rate of three-to-six-year-olds rose from 51 percent in 2009 to 75 percent in 2015 (MOE 2016). Since the primary goal was access rather than quality, this preschool expansion caused significant concerns about quality as well as equity in preschool education in China (Li et al. 2018). According to an evaluation report from the Ministry of Education of the People’s Republic of China, with limited teachers training and resources, the preschools in China were still very low quality (MOE 2015).

Since the Chinese children’s museum project originated in 2011, Yajima has been joined by Ni Zhang and her colleagues at CMRC to spread the concept of children’s museums and the importance of informal learning environments throughout China. Still, approaches to early learning remain different from Western models. The preschools in China are not within the scope of free compulsory education, which include elementary schools and middle schools for children ages six to fifteen. Chinese preschools, often called kindergartens, enroll children ages three to six. Some big government corporations have established preschools for their employees. There are some public preschools, which charge relatively low tuitions, but with limited space, it is very competitive for Chinese families to enroll their children in them. So, much like the U.S., many families pay tuition to enroll their children in private preschools/kindergartens, which charge higher tuitions but are nevertheless very popular.

Creating a Chinese Museum Preschool Curriculum

The educational objectives of Hohhot Lao Niu Children’s Discovery Museum are centered around creativity, curiosity, and imagination through engagement with interactive exhibits and education programs. These programs allow children and families to explore and investigate with their hands and minds. Like other children’s museums around the world, Hohhot Children’s Discovery Museum advocates for child-centered learning, which is in line with China’s 2001 Guidelines. The Hohhot museum-affiliated preschool, which will enroll 500 full-day children from age three to six, will carry the same educational philosophy and objectives. Closely affiliated with the museum and operating under the same board, the preschool will interact extensively with the museum.

CMRC has been working with Sharon Shaffer, former director of the Smithsonian Early Education Center (SEECC), to develop the preschool curriculum around the museum’s exhibits and it is hoped that preschoolers’ learning will take place regularly inside the museum. Recruiting and training teachers, however, will be the primary focus for now, as most preschool teachers in Hohhot are not familiar with the museum-based curriculum or facilitated learning.

At this stage of early childhood education transformation in China, the museum preschool will play a leading role in Hohhot’s local educational reform process. The learning value of unstructured play is not yet widely recognized by preschool teachers, parents, or caregivers. The Hohhot museum and preschool will serve to model and advocate for play-based learning for children. Its preschool teachers’ workshops and symposiums will provide enormous professional development opportunities for local preschool teachers.

The Future of Museum Preschools in Chinese Museums

Among all CMRC’s projects in China, Hohhot Lao Niu Children’s Discovery Museum is the only children’s museum so far with an affiliated preschool. As children and families in Beijing and Hohhot welcome the two pilot children’s museums, CMRC has been receiving inquiries about children’s museums from all over China. Determined to promote children’s museum education across this vast country, CMRC is working to establish collaboration with various institutions, including traditional museums and Children’s Palaces, that have particular interests in children’s museum education. CMRC is trying to help them transform existing children’s learning spaces into interactive learning spaces that will appeal to audiences of families with children who visit their museums.

As more early learning spaces open, whether museum preschools can be established at the same time will depend on the mission of the individual institutions as well as their capacity. The Hohhot museum and preschool model is very appealing to city governments interested in a standalone children’s museum. Because standalone children’s museums require a lot of funding, it is not easy for every city government to financially support such a project. While opening museum preschools will not be easy for many of our future projects, CMRC is trying to find a way to influence the pedagogy of other preschools in China. By developing museum outreach programs and providing professional development opportunities, CMRC hopes to continue to contribute to the transformation of early childhood education in China.

The concept of the children’s museum is still new in China. With an educational tradition based on didactic learning focusing primarily on academic achievement, Chinese parents have ingrained barriers to understanding the learning value of children’s museums. Even though families and children love our museums, they may not fully appreciate what their children are getting from them. CMRC is exploring different

continues on page 17
Museum Schools as Laboratories

continued from page 2

- **Sources.** Budgeting can be complex, as sources of revenue for the school (tuition, tax support per student) are different from traditional museum revenue streams. If there are shared services for administration, fundraising, and custodial/maintenance, everyone needs to agree on how much each entity contributes toward those expenses. Fundraising can be complicated if donors want to give to just the museum or just the school.

- **Engage the students as collaborators.**

The above list gives pause, and it should. However, the partnership of students learning in a museum environment, and contributing back to improve that environment, is a great return on investment.

At Portland Children’s Museum, students in Opal School have become active collaborators. We find no better place to engage children's creativity and spread their ideas than in our museum exhibits. After all, the most effective children's exhibits are informed by children themselves. Our exhibit designers work with classroom teachers so that concept exploration becomes a class project incorporated into the curriculum.

For example, in creating The Market, our students dreamed of illustrating the relationship between land and food. The result includes a grape arbor, apple tree, beehive, and chicken coop, which students drew out as a full-size floor plan in our exhibits staging area.

To develop our forthcoming water exhibit, Drip City, we collaborated with Opal School students as well as museum visitors, students at the nearby Native Montessori Preschool at the Faubion School Early Learning Center, and other diverse community members. Opal School students explored the concept of a watershed, took a field trip to the source of Portland’s water, and diagrammed their understanding in drawings that will become part of the final exhibit.

While Opal students do not regularly visit the museum every school day, many of them stay after school to play. Each student’s family can sign up for a play pass, free with enrollment, that allows them to play after school with their caregiver as long as they want, and to come on weekends and holidays free.

- **Unify under your philosophy as well as your roof.**

Portland Children’s Museum and Opal School’s relationship began as convenient co-location, supported by a common commitment to learning through play. Over time, it has matured into a unified learning philosophy called Playful Inquiry, based on five principles:
  - Explore playfully
  - Inspire curiosity
  - Share stories
  - Seek connections
  - Nurture empathy

We now consider the museum, Opal School, and our professional development offerings as laboratories for developing and disseminating this learning approach. We employ Playful Inquiry for informal learning with families in the museum, formal learning with students in the school, and professional learning with adult audiences through consultation, workshops, retreats, and symposiums. Topics offered to adult audiences include Equity and Access through Story, Supporting Social and Emotional Intelligence, and Constructing Collaborative and Courageous Learning Communities (For a complete list of offerings, go to https://learning.opalschool.org/pages/courses.) In the process, literal and figurative walls are becoming more porous. In contrast to seeing ourselves as united under one physical roof, we see ourselves united in practicing and experimenting with the same learning approach, just in different settings with different audiences.

To be sure, it’s a work in progress. Even after seventeen years, or perhaps because of that long history, there are ongoing challenges to resolve. For example, as the organization grows and space becomes more precious, which program (museum, school, or professional development) takes priority? However, whether staff members work in the museum, the school, professional development, or core mission support, we remember we all use the same learning approach to work with each other. By nurturing empathy for different perspectives, seeking connections in our work, sharing stories of success and failure, remaining curious about potential solutions, and exploring playfully together, we employ our learning approach to blur the boundaries between museum and school, which are united in a singular mission:

To develop innovative problem-solvers through playful learning experiences that strengthen relationships between children and their world.

Ruth Shelly has served as the executive director of Portland Children’s Museum and its associated Opal School and Museum Center for Learning in Portland, Oregon, since 2013. Prior to this Shelly was the executive director of the Madison Children’s Museum in Wisconsin.
include opening a kindergarten, or even a full elementary school, those would require a building expansion and are thus still in the realm of dreams.

**Advice**

- **Start small and work toward big goals incrementally.**
  
  Starting with part-time programming allowed staff to focus on developing the museum-based curriculum and program model without having to worry as much about full-time childcare regulations surrounding aspects like lunches and nap times.

- **Hire certified teachers and staff who know how to run schools.**
  
  High quality early childhood educators likely share the same values and attitudes as informal educators, but also have expertise specific to running a classroom/school that is both essential to a well-functioning program and expected by parents.

- **Expect a learning curve for new staff to learn the museum and for the museum to grow accustomed to having an on-site preschool.**
  
  Museum staff were initially concerned about preschoolers visiting unstaffed exhibits, but quickly learned that our preschool students behave quite differently than other field trip students. Familiar with the exhibits and accustomed to the museum as their learning environment, our preschool students are more self-directed and focused than field trip students who are often exploring the museum for the first time.

Claire Thoma Emmons is a research and evaluation associate, Susan Michal is director of early childhood education, and Elys Handel is an early childhood educator at The Children’s Museum of Indianapolis (Indiana).

Loretta Yajima is the founder and chair of the board of directors of the Hawaii Children’s Discovery Center in Honolulu. She opened a storefront museum in Hawaii in 1989 and moved it to its present permanent site in downtown Honolulu in 1998. She currently serves as senior advisor to the Children’s Museum Research Center, at the China Philanthropy Research Institute, Beijing Normal University.

Ni Zhang is the executive deputy director of the Children’s Museum Research Center at the China Philanthropy Research Institute, Beijing Normal University. She is a member of the board of directors for the Lao Niu Children’s Discovery Museum at China National Children’s Center in Beijing and chairman of the board of directors for the Hohhot Lao Niu Children’s Discovery Museum in Inner Mongolia.
The museum is a complex environment: classroom content is tied to Stepping Stones exhibits and programs, but new exhibits may be planned through an ELLI lens. ELLI children are not only in the museum every day, but they also frequently interact with back-of-house staff who have expertise in areas relevant to what they are learning.

Why Not a Preschool?

continued from page 5

median income. This approach to enrollment not only ensures equity and access, but also supports ELLI’s approach to scaffolding learning, which is best achieved with a mix of students coming from a broad range of experiences.

The ELLI classroom is an immersive and ever-changing teaching and learning tool. Daily ELLI programs embed language and literacy, STEAM-infused content, and 21st century skill-building opportunities into every learning activity. Classroom “big ideas” and related curriculum revolve around major topics such as community, global awareness, health, and the environment. “Big ideas,” selected annually, play out in the museum and in the preschool classrooms. The museum is a complex environment: classroom content is tied to Stepping Stones exhibits and programs, but new exhibits may be planned through an ELLI lens. ELLI children are not only in the museum every day, but they also frequently interact with back-of-house staff who have expertise in areas relevant to what they are learning. ELLI students learning about healthy food choices, for example, go behind the scenes in the museum’s cafe.

ELLi Teachers Learn to Teach the ELLi Way

The ELLI Teaching Team is comprised of professionals from varied backgrounds; all meet both NAEYC and Connecticut state teaching requirements. But ELLI teachers do more than deliver a standard, prescribed curriculum. They create their own curriculum, classroom environment transformations, and related materials. For example, one year, Stepping Stones’ annual “big idea” was Small Worlds. Teachers juxtaposed an actual-size model of a paleontology dig site with a miniature version in the classroom to give kids the experience of scale. Researching “big ideas” and how they might play out among preschoolers is a process similar to what an exhibit designer does, and not what the usual teacher is prepared for. Most ELLI teachers reach a mastery of the ELLI approach after two or three years in the classroom, and ongoing professional development is vital to their success.

The ideal ELLI teacher-to-child ratio is 1:6. However, both teachers and students can serve as the “more knowledgeable other” and contribute to everyone’s learning. All ELLI preschool children are viewed as readers and writers. An eighteen-month-old turning the pages of his first board book is learning one of the fundamentals of reading—how to physically handle a book—while the four-year-old next to him points to the bear on a page and knows that word starts with “B.” A two-year-old isn’t just scribbling, but learning to hold a writing instrument that will later be used to write her name. ELLI teachers facilitate learning with ELLI children and with their parents as partners. Family engagement is a top priority. ELLI families receive museum memberships and are regularly invited to attend museum and ELLI events throughout the year.

ELLI classrooms are accredited by the National Association for the Education of Young Children (NAEYC). They are also guided by a consortium of research partners representing Literacy How, Florida University, Ohio State University, Southern Connecticut State University, and Yale University of Medicine, who meet regularly to determine how to share ELLI outcomes. For example, “how well are ELLI graduates performing in elementary school?”

Research has clearly demonstrated that quality early childhood education matters, especially for children impacted by the opportunity gap. Yet there are still many unanswered questions about what quality is. “What are the optimal conditions required for children to learn and grow up successfully?” is the primary question posed through the ELLI Research Agenda, an anchor of the ELLI Lab School and classrooms. The agenda guides ELLI growth and replication in new venues, including continuous improvements in program and curriculum development, the selection of assessments tools, and modifications to the design and delivery of professional development for teachers and families.

Research studies conducted annually by ELLI staff and research partners are designed to evaluate the ELLI approach and determine whether ELLI improves children’s early literacy skills and academic skill performance. Researchers look for answers to three specific questions:

1. Do children in ELLI classrooms demonstrate learning gains in the areas of oral language, academic achievement, and early literacy skills in preschool and, subsequently, in elementary school?
2. What are the characteristics of ELLI classrooms and the language and literacy opportunities that facilitate children’s learning gains and prepare them for kindergarten?
3. Do children that completed ELLI preschool demonstrate higher achievement than their same-age peers, matched on confounding variables, who did not complete ELLI preschool programs?

To answer these questions, we document implementation of critical ELLI program
Building Foundational Skills through Play at a Children’s Museum

Nicole R. Rivera, North Central College

Children’s museums provide important early learning experiences. Whether they provide formal early learning programs, supportive programming, or family-based opportunities, children’s museums are unique environments that support the social and emotional development of young children, which is essential to their development and learning. Since 2014, the Children’s Museum Research Network (CMRN) has actively pursued field-based research to explore how children’s museum exhibits provide opportunities for children to engage in playful learning, and how caregivers perceive this learning.

A recent report by the American Academy of Pediatrics (2016) proclaimed the value of play in supporting healthy child development. In addition to supporting the development of language and thought, “early learning also combines playful discovery with the development of social-emotional skills” (Yogman, Garner, Hutchinson, Hirsh-Pasek & Golinkoff 2018, p. 3). These skills are associated with the 21st century skills that set young children up for long-term success. Children’s museums are well aware of the importance of play, and in fact, play is central to the work of children’s museums. The Association of Children’s Museums defines children’s museums as unique community institutions that recognize that “Play is learning, and it is critical to healthy social, emotional, and cognitive development of children” (Association of Children’s Museums 2018).

What is significant about the AAP report are the connections it makes between playful learning and the development of social and emotional skills. Social-emotional learning (SEL) is defined as “[enhancing] students’ capacity to integrate skills, attitudes, and behaviors to deal effectively and ethically with daily tasks and challenges.” (Collaborative for Academic Social and Emotional Learning (CASEL) 2018). CASEL indicates that social and emotional skills are defined by five competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Research demonstrates that these skills support academic success.

The National Association for the Education of Young Children (NAEYC) identifies relationships as their number one standard for early childhood programs. NAEYC stresses the importance of supportive adult relationships that encourage a “child’s sense of individual worth and belonging as part of a community,” which includes children’s abilities to play with other children, identify their feelings, and problem-solve social situations. These foundational skills for children are established through play.

Two recent CMRN studies focus on the role of children’s museums to support social and emotional learning through playful learning. The first study surveyed caregivers to explore their perceptions of the learning that occurs during a children’s museum visit. Participants were recruited from eight children’s museums across the United States. 223 caregivers completed surveys a few days after their visit to the children’s museum.

When asked if they discovered anything about their children during their visit to the children’s museum, 70 percent of respondents indicated that they learned about how their children interact with other people. 46 percent of individuals stated they discovered how their children regulate their emotions. Caregivers also perceived that the materials and activities available at the museum contributed to their children’s learning, providing them with opportunities to interact with other children. These data highlight the importance of both the built environment and the presence of other children in the museum playspace in allowing caregivers to observe how children interact with others and regulate their emotions.

As a follow up to this study, CMRN conducted a second study focusing on the social and emotional behaviors that children demonstrate when in a children’s museum exhibit. Researchers used an adapted version of the Minnesota Preschool Affect Checklist (MPAC) to observe children ages four to five in intervals up to ten minutes. Some of the areas assessed with the MPAC include positive affect, negative affect, frustration, and collaborative and prosocial behaviors. Specifically, the collaborative behaviors included organizing, joining an activity, or listening to others. The prosocial behaviors included taking turns, cooperating, and sharing.

Researchers completed 468 observations in fourteen children’s museums. The exhibits they selected were spaces designed to foster young children’s social-emotional development. While a full reporting of the data is beyond this scope of this article, an initial analysis supports the notion that children’s museum exhibits do provide opportunities for young children to develop social and emotional skills. Data shows that children demonstrated the highest incidence of positive affect when the behaviors were directed at another person, which is to say, when interacting with other visitors. Observations of negative affect and negative involvement were limited. Children demonstrated behaviors such as organizing activities, joining an activity, and listening to others to engage in an activity. They also demonstrated taking turns, cooperating, and sharing.

Children’s museums provide important spaces for young children to develop social and emotional learning skills, which in turn help children manage the world around them and prepare them for future success. Thoughtfully built environments and the presence of other children provide children opportunities to co-create experiences and explore boundaries through child-centered experiences. Children’s museums are valuable additions to the learning ecosystem for young children. Children that attend a preschool within a children’s museum likely benefit from the intersection of both formal and informal learning experiences. 


components and observe the teachers’ classroom instruction. To help determine what makes a good ELLI teacher, we are studying the relationship between teachers’ attitudes about language and literacy skills and their knowledge of the theory and pedagogy of teaching children to read, and children’s reading outcomes.

Over the past three years, Stepping Stones and Literacy How have administered language and literacy assessments to all ELLI children comparing growth from fall to spring on a number of different standardized measures. For each cohort of ELLI children, we have documented statistically significant growth. On average, ELLI children increased their standard scores on multiple measures—growth that goes beyond what is expected for same-age peers. These outcome data are especially important since one of our primary goals is to close the opportunity gap that exists for many.

Why Not Make a Difference?

When the ELLI Lab School first opened, some Stepping Stones team members viewed ELLI as an “extra,” and not part of the museum’s core operations. While most team members enjoyed having young ELLI friends nearby and valued the expertise of ELLI colleagues, there was a perception that ELLI was taking over, and its base headquarters, the “museum,” was not getting its fair share of attention.

As the ELLI approach evolved from best practices identified by Stepping Stones and Literacy How, ELLI learning is now transforming Stepping Stones’ educational offerings, team, and culture. We have a more accessible and holistic understanding and appreciation for what matters to the children, families, schools, and communities we serve and have the potential to serve. Future museum experiences are being planned through ELLI lenses to intentionally make learning visible and effectively measure growth and achievement. Because of ELLI, investors and other stakeholders can clearly understand the valuable and impactful role that Stepping Stones, and other children’s museums, provide for our communities.

Rhonda Kiest is president and CEO of Stepping Stones Museum for Children, where Cristina Matos is vice president of The Early Language and Literacy Initiative. Margie Gillis, PhD, is founder and president of Literacy How.