Rosemarie T. Truglio, senior vice president of curriculum and content at Sesame Workshop®, told the audience of 200 at the Success Starts Young Conference that the first five years are critical in the development of children’s brain structure. Truglio revealed that by the age of five, 92 percent of the brain has been formed, laying the groundwork for relationships, school achievement and, ultimately, adult participation in work and family life. This reinforces the need for high-quality programs for young children.

Conference speakers agreed that ensuring every young child receives the support needed for a healthy, successful future is a key national challenge. Too often, those not receiving the necessary levels of support are low-income or minority children, those who most need the boost that a quality early childhood program can provide.
According to speakers, on a number of fronts — in establishing early learning standards, measuring and promoting kindergarten readiness, and putting new technologies to work in the lives of young children — there is reason for optimism. Not only social justice, but also economic and political imperatives demand that every American child have the opportunity to grow into a productive adult. “The greatest national military and economic security problem does not come from any outside enemy,” said conference speaker Marian Wright Edelman, president of the Children’s Defense Fund (CDF). “It comes from our failure to invest in our people and our children.”

The essential role that educational experiences can play during the crucial first years of life was the subject of the conference “Success Starts Young: Closing Achievement Gaps Where They Begin,” which was co-convened by ETS, CDF and Sesame Workshop, the nonprofit organization that produces “Sesame Street.” The conference, the latest in ETS’s “Addressing Achievement Gaps” symposium series, was held September 18, 2015, at the National Press Club in Washington, D.C. It featured a keynote address and a series of panel discussions involving a dozen researchers, advocates, public officials and representatives of nonprofit organizations.

“Research shows that high-quality pre-K education produces substantial and lasting benefits for children, families and society. Early learning is among the best investments that a society can make in its future.”

– Walt MacDonald

Early childhood education has a powerful impact, conference speakers agreed. An analysis by the White House’s Council of Economic Advisers found that early childhood education was associated with an increase in cognitive achievement of one-third of a standard deviation, ETS President Walt MacDonald said — the equivalent of more than half the gap in kindergarten achievement between White and African-American students. He continued on to say that children who enrolled in New Jersey’s publicly funded urban preschool program had higher test scores, lower rates of grade retention and less need for special-education services than children who did not participate in the program, and test-score gains were higher for those who spent two years in pre-K, rather than just one. Among the skills that children develop early in life, Truglio noted, are so-called executive function skills — such qualities as resiliency, impulse control and goal-setting — which are linked to everything from SAT® scores to drug use. “This is why Sesame Workshop focuses on the earliest years,” said conference speaker Jeffrey Dunn, the Workshop’s president, “because they matter the most.”

It is far easier to ensure that children develop essential cognitive, social and emotional skills in their early years than to work on these issues later, conference speakers said. “If we think that
investing millions of public dollars in K–3 around specific reading techniques is going to fix where we didn’t invest in early learning and language development, we are sadly, sadly mistaken,” said speaker Rhian Evans Allvin, executive director of the National Association for the Education of Young Children (NAEYC). Accordingly, policymakers concerned about the outcomes of schooling would be well advised to focus their efforts on the very beginning of the educational process, speakers said. “If you really want to talk about graduation rates, if you really want to talk about college and career readiness, you’ve got to back that conversation up,” said conference speaker W. Clayton Burch, chief academic officer in the West Virginia Department of Education. “If you want to tackle third-grade reading, you’ve got to tackle it as early as possible.”

“If you really want to talk about graduation rates, if you really want to talk about college and career readiness, you’ve got to back that conversation up. If you want to tackle third-grade reading, you’ve got to tackle it as early as possible.”

– W. Clayton Burch

Insights like these are stoking a growing momentum for providing universal access to preschool, MacDonald said. In 2013–14, 29 percent of the nation’s 4-year-olds were enrolled in state-funded preschool, and the White House’s 2014 summit meeting on early education drew one billion dollars in commitments from public-private partnerships. Tellingly, early childhood education is not just a crucially important intervention; it is also a remarkably cost-effective one, conference speakers said.

MacDonald informed us that if every family had as much access to pre-K education as the wealthiest already do, the long-term impact on the nation’s gross domestic product would more than cover the extra dollars spent providing services. “Research shows that high-quality pre-K education produces substantial and lasting benefits for children, families and society. Early learning is among the best investments that a society can make in its future,” MacDonald said.

A Non-System System

Despite this expert consensus on the importance of the early years, however, the American system of early care and education frequently falls short, conference speakers said. “I would love to be able to tell you that the United States decided as a culture that we would come together and nurture and support this first stage of human development, but that’s really not true,” said Jacqueline Jones, president of the Foundation for Child Development, who spoke at a dinner the night before the conference. Instead, Jones said, “The nation’s early care and education system developed reactively, as a response to poverty, inequity and the persistence of achievement gaps.” The result is a fragmented “non-system” with many
moving parts that do not always mesh seamlessly, paid for through an array of funding streams with sometimes conflicting accountability requirements. All of the different pieces "are wonderful, if they only fit together, but they sort of don't," Jones said.

"The nation’s early care and education system developed reactively, as a response to poverty, inequity and the persistence of achievement gaps." The result is a fragmented "non-system" with many moving parts that do not always mesh seamlessly, paid for through an array of funding streams with sometimes conflicting accountability requirements.

This fragmentation is especially visible and problematic in the realm of teacher qualifications, conference speakers said. The credentials required to teach preschool vary widely from state to state and, all too often, states set the bar low. According to Jones, in Florida, early childhood teachers need nothing more than a high school diploma, while in New Jersey, where Jones once served as an assistant education commissioner, the same position requires a college degree and a specialized teaching certificate. The absence of uniform and rigorous requirements prevents the full professionalization of the field, and results in wide discrepancies in the quality of preschool programs. "It is hugely troublesome that we have no nationally agreed-upon set of standards that define what early childhood professionals should know and be able to do," Jones said.

That omission is especially striking given the growing consensus that effective early childhood teaching requires a rigorous, sophisticated understanding of the science of child development, conference speakers said. "We really have to ground [child-care providers] in developmental psychology," said Truglio, of Sesame Workshop. "How do children learn? What are the developmental progressions?"

Good early childhood teaching is rigorous and intentional, speakers said — the furthest thing from the glorified babysitting of popular stereotype. "You can’t just wing it. You can’t just trust your gut and hope it all works out okay. There is research and science and pedagogy," said Evans Allvin, of NAEYC. Unfortunately, unfamiliarity with developmentally appropriate early childhood practices can extend to school leadership, speakers said. "Teachers tell me, ‘I should have learning centers, I should be helping children explore in a playful way, but my principal tells me I can’t.’ We have elementary principals who really don’t understand what good practices should look like and prohibit teachers from doing what they know is right,” said speaker Judith Walker, an official in the Division of Early Childhood Development in the Maryland State Department of Education.

Predictably, the children who suffer most from such failures are low-income and minority children.
— those most in need of the equal start that early education can provide. A *Mathematica* analysis of 2010–11 data, commissioned by Sesame Workshop, found that entering kindergarteners’ proficiency in reading, math and two measures of executive function falls with each additional risk factor students face — conditions like growing up in poverty, living in a single-parent or non-English-speaking household, or having a mother who has not finished high school. Children with all four risk factors begin kindergarten nearly a year behind peers with no risk factors, the analysis found. For children starting out at such a disadvantage, poorly trained teachers can compound the damage, making it even harder to catch up. When teachers without adequate training in developmentally appropriate educational practices narrowly focus literacy instruction on teaching word sounds and the ABCs, “too often, it’s our poor and minority children who bear the result of that miseducation by well-meaning, hard-working teachers,” said conference speaker Dorothy S. Strickland, professor of education (emerita) at Rutgers University’s National Institute of Early Education Research.

The field’s lack of diversity can also hamper children’s progress, speakers said. “Many of our children never see anyone who looks like them or has been through poverty,” said Walker, of the Maryland Department of Education. It’s hard for a teacher to understand how to differentiate instruction for those children if they’ve never experienced it themselves. Even well-meaning teachers may generalize excessively about members of other racial or ethnic groups, failing to respect the diversity within these groups. Strickland said, “It’s especially problematic when you’re dealing with young children, and you have so much control over their lives, and you come with all this baggage about who they are and what the expectations should be for them.”

“A lack of diversity can even affect judgments about the quality of teaching,” said conference speaker Dawn A. Kurtz, senior vice president of programs for Los Angeles Universal Preschool (LAUP), a nonprofit that supports more than 600 early education providers. “Evaluators assessing the performance of teachers whose backgrounds they do not share may misunderstand — and disapprove of — practices that, in cultural context, are entirely appropriate,” she said.

**Leveling the Playing Field**

Despite the many challenges facing the field of early education, conference speakers found reasons for optimism. In the past decade, spurred in part by the Obama administration’s Race to the Top grant program, every state, U.S. territory and Washington, D.C., has adopted early learning standards for preschoolers, and many have adopted similar standards for infants and toddlers, according to conference speaker Catherine Scott-Little, an associate professor of human development and family studies at the University of North Carolina at Greensboro. “These standards, spelling out what young children should know and be able to do, provide an important foundation for equity in preschool programming,” she stated. “They even out our expectations for all children from different circumstances and backgrounds. Early learning and development standards level the playing field in terms of what we expect from children and children’s access to intentional teaching.”

Unlike the Common Core State Standards for elementary and secondary schools, which were developed by national policy experts, state early learning standards typically are developed by local stakeholders, including teachers, Scott-Little said. “In West Virginia, the standards development process
brought together a broad coalition representing private child-care providers, the federal Head Start program and the public schools,” said conference speaker Burch, the West Virginia education official. In West Virginia, through the process of collaborating on standards development, the coalition developed a unified voice that has changed the state conversation about early learning. This resulted in state officials beginning to make policy that addresses the full continuum of early child development from birth into the lower elementary grades, rather than focusing solely on kindergarten entrance. One practical result: the early childhood community persuaded state policymakers to spend most of a $6 million appropriation for a third-grade reading initiative on programs aimed at children from birth to age five. “As soon as the early childhood community came together and had that agreement on standards, voices changed,” Burch said.

Conference speakers cautioned that standards alone are not enough to ensure high-quality early childhood education. Learning standards for children should go hand in hand with professional standards for teachers and quality standards for the programs that enroll them. “We can’t just put this notion of standards on the back of young kids and not think about the obligation of programs and adults, said NAEYC’s Evans Allvin. “Even the best learning standards must be implemented carefully, using developmentally appropriate teaching practices — and teachers need to see concrete examples of such practices.” A NAEYC-produced slide show, posted on YouTube® in March 2015, shows preschoolers in Louisiana State University’s Child Development Laboratory Preschool celebrating “Taco Tuesday” by taste-testing bell peppers, visiting a food truck, measuring ingredients, making their own mini-tacos, surveying college students about their food preferences, and documenting their investigations with photos. “That is very intentional teaching that you have to learn through pedagogy,” Evans Allvin said. “We have to show people what it means to be able to do these standards and hold developmentally appropriate practice front and center.” Without such an understanding, teachers may become overwhelmed by the volume of material they are expected to cover and resort to less-than-optimal teaching practices, such as lecturing to large groups or focusing narrowly on a few academic skills, rather than promoting comprehensive child development. “It’s important to set standards, but unless teachers understand what they look like and how to execute them in terms of learning experiences, they actually can get in the way,” said Strickland, the Rutgers professor emerita.

The promise, and the potential pitfalls, of standard setting further highlight the importance of professional training that is commensurate with the sophistication of the tasks early childhood teachers must perform. “We have a lot of standards — states have them, the feds have them,” Evans Allvin said. “It really is time for us to think about how we align our professional development systems so that we can make sure that teachers are getting the support, the skills, the knowledge, the abilities that they need to support kids and families.”

The Power of Data

Early childhood educators sometimes complain that the education reform movement’s emphasis on standards and testing has pushed developmentally inappropriate academic demands down to earlier and earlier grades. More hopeful, conference speakers said, is the spread of early learning standards from preschool into the earliest grades of elementary school — in effect, pushing child-development knowledge up the age ladder. Kindergarten entrance still marks an important milestone in children’s schooling, and national data suggest that many
5-year-olds are unprepared for that milestone when they reach it. The Mathematica analysis commissioned by Sesame Workshop found that more than one-third of American children start kindergarten needing extra levels of support in such fundamental areas as reading, mathematics and social/emotional skills.

“It’s really important for us that, when a child looks at our content, they can say, ‘I see myself on Sesame Street.’”

– Rosemarie Truglio

Sobering as such data may be, they can help inform the public and build political momentum for early childhood programs. In Maryland, said education department official Walker, a newly developed kindergarten readiness assessment, administered by teachers during the first eight weeks of kindergarten, measures children’s proficiency in four areas: literacy, mathematics, physical well-being and social foundations. An earlier state assessment, aligned with a school-readiness model developed 13 years ago, had typically found more than 80 percent of children ready for kindergarten, but in its first year of use, the new tool, which is aligned with the state’s pre-K–12 academic standards, yielded far less reassuring results: only 47 percent of Maryland’s 67,000 kindergarteners were prepared to do kindergarten work without extra instructional support. “For us, it’s been a very powerful set of data because it’s enabled us to get the state legislature to provide funding for more pre-K programs for children,” Walker said.

Maryland’s program is not meant to be a high-stakes assessment or a tool for evaluating teacher performance. The goal is to provide information to parents and policymakers and to guide pedagogy. To complement the kindergarten-readiness assessment, this year the state is launching a more detailed early learning assessment designed to help teachers pinpoint students’ areas of struggle so they can better differentiate instruction. Panel moderator Janine G. Bacquie, CDF’s national director of early childhood policy and practice, cautioned that kindergarten-readiness assessments must be used with care, lest they become new ways of sorting and classifying students — and thus, potentially, new barriers to equity. “We don’t want to say, ‘You’re in, you’re out.' It’s not really about that,” Bacquie said. “There also is a lot of opportunity for bias, even when we set out with the best intentions. We’ve really got to take a look at what we’re doing and be very careful that it’s not used in some way to be an exclusionary measure,” Bacquie added.

Game Changer

Building kindergarten readiness in preschoolers need not require expensive high-tech tools. The work can be as low-tech as encouraging adult-child conversation. “In Los Angeles County, efforts to help preschool teachers take better advantage
of circle time spurred development of family engagement tools for parents,” said conference speaker Kurtz, of LAUP, the preschool nonprofit. LAUP’s “Take Time. Talk!” program draws on research about language development to encourage parents to talk, read and sing to their children. “We’ve gotten a lot of really great feedback from parents from very diverse backgrounds about how exciting it is for them to think about building their children’s vocabulary,” Kurtz said.

Although early learning can happen with nothing more than a parent, a child and a picture book, technology does have a role to play in preparing young children to succeed in school and beyond, conference speakers said. “Technology is a tool for learning,” said conference speaker Chip Donohue, director of the Erikson Institute’s Technology in Early Childhood Center. “If we give very young children tools for learning, they will have tools for learning throughout their lives, and they will know that they can control these tools. Traditional media and new communication methods can open up possibilities — teaching children specific academic and social skills, providing their teachers with better training, and engaging their parents in promoting learning.”

“Learning new words helps me learn more about the world around me.”

— Abby Cadabby

“Well-designed media can help children grow in both academic and social/emotional areas,” said Sesame Workshop’s Truglio. To ensure that its programming provides that boost, Sesame Workshop involves child-development specialists in the creation of curriculum, and conducts follow-up assessments to check the effectiveness of its content. Sesame Workshop research has found that children shown a “Sesame Street” science segment gained new understanding of concepts like pollination, habitat and metamorphosis, while those who watched the ever-hungry Cookie Monster™ wrestle with his urge to eat increased their ability to delay gratification by four minutes, a significant gain for young children. Because vocabulary is most effectively developed in informal settings, rather than in formal classroom lessons, Sesame Workshop has created special segments designed to teach new words across the curriculum. Joining Truglio on the podium was Abby Cadabby, a pink, pigtailed Muppet™ fairy, whom Truglio took through her own “Sesame Street” vocabulary lesson featuring the words “spectacular,” “scrumptious,” “octagon” and “investigate.” Learning such words helps children talk about their feelings, acquire healthy eating habits, and grasp math and science concepts. “Learning new words helps me learn more about the world around me,” Abby confirmed, before insisting that the audience repeat one final new word: “twinkletastic.”

“Even the men in suits said it,” she chortled.
Although the 46-year-old “Sesame Street” and its international spinoffs are still the core of the work, Sesame Workshop’s mission extends into other traditional media, such as radio and books, and an array of newer technologies, from web-based games to mobile apps. Transmedia applications are also integral to the Hispanic Information and Telecommunications Network’s efforts, which aim to teach English and Spanish vocabulary to young children who are dual-language learners. “The lessons, which include prepositions and other parts of speech that allow deeper conversation, relate to such perennially popular early-childhood topics as transportation,” said conference speaker Ed Greene, the Hispanic Information and Telecommunications Network’s senior director for educational outreach and partnerships. Smartphones and tablets untether learners from the living room television or the classroom computer, making lessons available during supermarket shopping trips or the walk home from school — whenever children are ready and eager to learn. Such mobile technology “goes where learning is happening and supports the learning,” speaker Donohue said. “That’s a big game changer.”

That game changer affects not only children, but also the adults in their lives. Newly ubiquitous video allows teachers to watch developmentally appropriate pedagogy in action, via a YouTube video like NAEYC’s “Taco Tuesday” or more explicit instructional segments. “Video can be a tool for showing what good practice and good engagement

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— Yvette Sanchez Fuentes

and just joyful interactions can look like,” said conference speaker Lisa Guernsey, director of the Early Education Initiative at the New America Think Tank. She added, “Now that it’s so easy to share videos and so easy to get them in our hands, we just have to use this more and more, to be showing what’s really possible with young kids.”

Technology also provides a way to involve parents in their children’s learning. “In Maine, home visitors armed with iPads bring immigrant parents a suite of electronic tools that help them engage their children in taking pictures, making books and exploring the public library,” said Guernsey. The Hispanic Information and Telecommunications Network (HITN) partnered with Ready Rosie, an online provider of short early childhood instructional videos, to show parents how to turn a chore like loading the dishwasher into an opportunity for building vocabulary, in English or Spanish. Additional video links give parents more information about the exercise and why it is important. “What we did was deconstruct our transmedia initiative, based on the information that we learned from our development, and put it back

Yvette Sanchez Fuentes, National Alliance for Hispanic Families
into a form that families thought that they could use more effectively,” Greene said. Because many children do not spend their preschool years in formal child care settings, such efforts to engage their parents are especially important, said conference speaker Yvette Sanchez Fuentes, of the National Alliance for Hispanic Families. “If the science is telling us that exposure to language, whatever the language is, is what makes the difference, we have to think about where our kids are spending their time. Teachers are important, but so are families and so are communities,” she said.

Navigating the “Wild West”

Conference speakers agreed that as promising as new technologies are, they pose special challenges. Resources that are ubiquitous in much of the country may be out of reach in poor, rural areas that lack so much as a broadband connection. “How do you get the investment so coordinated and dispersed that it’s applied toward every human being in the country?” said Michael T. Nettles, ETS senior vice president. “Despite the fact that we have all of this productivity underway, people across the country are not aware of it and don’t always have access to it.”

Meanwhile, for teachers and parents trying to find their way through what Guernsey called the “Digital Wild West,” using technology to teach young children requires first locating appropriate, effective, research-supported materials. “Curation is the key, and that’s a high level of skill and knowledge. That’s a digital media literacy issue,” said Donohue, of the Erikson Institute. Websites like Common Sense Media (https://www.commonsensemedia.org/) and Teachers With Apps (http://www.teacherswithapps.com/) can help. Ultimately, however, good content will emerge as communities of educators share their developing understanding of what works, conference speakers predicted. “Adult-adult relationships are a key. If we don’t build these communities of practice where adults learn how to be able to talk with each other and you have instructional leaders who provide the time for that, they’re never going to be able to use those materials anyway,” said Greene, of HITN.

“This is why Sesame Workshop focuses on the earliest years, because they matter the most.”

– Jeffrey Dunn

Like the early childhood teaching force, the available materials do not always reflect the diversity of the classrooms in which they must be used. “Children’s media are often based on children’s books, and minority characters are underrepresented in children’s literature,” said conference speaker Kevin Clark, a professor of learning technologies and director of the Center for Digital Media Innovation and Diversity at George Mason University. Only 3.1 percent of children’s books feature African-American characters, 2.1 percent feature Asian characters and 1.5 percent feature Latino characters. Yet, studies
show that such images affect what children think they are capable of doing, now and in the future. “Media plays a powerful role in the formation of ideas, the development of perceptions,” Clark said. That message has been heard at Sesame Workshop, where whole seasons of “Sesame Street” have been devoted to learning about specific racial and ethnic groups, and a new initiative aims to support families and children with autism. “It’s really important for us that, when a child looks at our content, they can say, ‘I see myself on Sesame Street,’” Truglio said.

Despite the power of technology, parents and teachers remain wary of excessive screen time, and conference speakers emphasized that such concerns have some merit. “It’s through relationships that we grow best and learn best,” said Donohue, of the Erikson Institute, quoting Fred Rogers of “Mister Rogers’ Neighborhood.” Not all screen time is created equal — passive television-watching is not the same as interactive engagement. Technology is a tool that should be deployed for specific educational purposes, not as a cheap substitute for babysitting. “Yes, all this technology is great, but we need to know where to set the limits,” said Clark, of George Mason University. “We need to know that at dinner time, no one is on the phone, or any device.”

Demographic Destiny

The challenge of providing every American child with high-quality early care and education is one piece of the larger puzzle facing the 21st-century United States, a changing demographic picture with powerful social and economic implications. “Lack of political will, rather than lack of money or knowledge, constitutes the real barrier to improvement in the country’s system of early care and education,” said Edelman, the CDF president. “We know how to teach young children effectively, but not every political leader cares about the education of children of color. We don’t have a money problem in America. We have a profound values and priorities problem,” Edelman said.

To ensure the future of America and support for an aging Baby Boom generation in their long retirement, we need to educate the younger generations who will make up the workforce of tomorrow. Education must begin in the early years. Both capitalism and democracy, the twin pillars of American society, require an educated populace. Yet the fastest-growing segments of the population are those racial and ethnic groups that historically have been at greatest risk of being left behind educationally. “I can tell you as a businessperson: the math on this does not work,” Sesame Workshop CEO Dunn said. “Our national self-interest demands that we fix this, and fix it urgently.”

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need in order to reach their full potential. The early childhood sector is complex and fragmented, with funding sources and oversight responsibilities divided among an array of federal, state and local agencies supervising a mix of public and private providers. No national standards specify what children should learn in their first years of life, and no one professional canon defines the qualifications their teachers and caregivers should have. The result of this fragmentation is inequity, with some children receiving excellent early care and education while others — often, low-income and minority children — receive far less adequate services.

However, progress is visible on a number of fronts. All 50 states, five territories and the District of Columbia have developed early learning standards that lay out what children should know and be able to do by the
time they enter kindergarten. Data on kindergarten readiness is beginning to shape state policies on early childhood funding and programming. Researchers and educators are harnessing new media and communications technologies to reach parents and young children, both during the school day and in the many teachable moments that fall outside of it. All this work is crucially important for strengthening the multifaceted American system of early care and education, and is essential not only to the well-being of children and families, but also to the nation’s future economic and political stability.

“Success Starts Young: Closing Achievement Gaps Where They Begin,” a symposium co-convened by ETS, Sesame Workshop and the Children’s Defense Fund (CDF), the latest in ETS’s “Addressing Achievement Gaps” symposium series, took place September 18, 2015, in Washington, D.C. It featured conversations among researchers, advocates, public officials and representatives of nonprofit organizations. ETS President Walt MacDonald gave opening remarks, ETS Senior Vice President Michael T. Nettles gave closing remarks, and Sesame Workshop President Jeffrey Dunn and CDF founder and President Marian Wright Edelman made both opening and closing statements.

“The greatest national military and economic security problem does not come from any outside enemy. It comes from our failure to invest in our people and our children.”

– Marian Wright Edelman

Rosemarie Truglio, senior vice president of curriculum and content at Sesame Workshop, delivered the luncheon keynote address. Sessions were moderated by Janine G. Bacque, national director of early childhood policy and practice at CDF; Andrea DeBruin-Parecki, principal research project manager in ETS’s Early Childhood Research & Assessment Center; and Michael Levine, founding director of the Joan Ganz Cooney Center at Sesame Workshop.

More information about the symposium can be found at www.ets.org/research/earlychildhood.