# SESAME STREET

COMBINING EDUCATION AND ENTERTAINMENT TO BRING EARLY CHILDHOOD EDUCATION TO CHILDREN AROUND THE WORLD



## SESAME STREET

Sincere gratitude and appreciation to Priyanka Varma, research assistant, who has been instrumental in the production of the Sesame Street case study.

We are also thankful to a wide-range of colleagues who generously shared their knowledge and feedback on the Sesame Street case study, including: Sashwati Banerjee, Jorge Baxter, Ellen Buchwalter, Charlotte Cole, Nada Elattar, June Lee, Shari Rosenfeld, Stephen Sobhani, Anita Stewart, and Rosemarie Truglio.

Lastly, we would like to extend a special thank you to the following: our copy-editor, Alfred Imhoff, our designer, blossoming.it, and our colleagues, Kathryn Norris and Jennifer Tyre.

The Brookings Institution is a nonprofit organization devoted to independent research and policy solutions. Its mission is to conduct high-quality, independent research and, based on that research, to provide innovative, practical recommendations for policymakers and the public. The conclusions and recommendations of any Brookings publication are solely those of its author(s) and do not reflect the views of the Institution, its management, or its other scholars.

Support for this publication and research effort was generously provided by the John D. and Catherine T. MacArthur Foundation and The MasterCard Foundation. The authors also wish to acknowledge the broader programmatic support of the William and Flora Hewlett Foundation, the LEGO Foundation, and the Government of Norway.

Brookings recognizes that the value it provides is in its absolute commitment to quality, independence, and impact. Activities supported by its donors reflect this commitment, and the analysis and recommendations are not determined or influenced by any donation.

> Christina Kwauk, Daniela Petrova, and Jenny Perlman Robinson

COMBINING EDUCATION AND ENTERTAINMENT TO **BRING EARLY CHILDHOOD** EDUCATION TO CHILDREN **AROUND THE WORLD** 



# Sesame Street at a glance

## EDUCATION LEVEL:

Early childhood education (children 2-8 years old)





## LOCATION:

International coproductions in 39 countries, plus television broadcasts in more than 150 countries

## FOCUS OF INTERVENTION:

Early childhood development, reading, language, mathematics, social and emotional development, and health knowledge and practice delivered through television, radio, videos, print materials, and interactive media

## **INTERVENTION OVERVIEW:**

Sesame Street (1969-present), which is produced by the nonprofit organization Sesame Workshop, began as an educational television program in the United States with the goal of preparing children for school by combining entertainment with education. Today, Sesame Workshop has grown into the single largest informal educator of young children around the world, with Sesame Street reaching millions of children in more than 150 countries, including through 39 international coproductions that have been produced and broadcast at various times during the past 46 years. Sesame Workshop uses television, radio, videos, websites, and print content to offer learning opportunities both in and out of school to preschool-age children, particularly in contexts where formal preschool systems are not well established or are beyond the reach of most of the population. In addition to mathematics and literacy skills, Sesame Workshop's programs address children's development holistically and teach lessons about health and wellness, emotional well-being, and positive social interactions like encouraging respect and understanding. Although the international Sesame Street coproductions share a universal style, and an approach that mixes education and entertainment, each country's series is developed by in-country production teams and is based on the needs of the country's children and its specific education goals.

## **TYPE OF LEARNING MEASURED:**

Literacy and numeracy, social and emotional development, health knowledge and practices, and respect and understanding

## COST:

The cost varies, depending on the amount of oversight, support, and training needed; project elements (i.e., television only, or in combination with radio, community, and school engagement projects); production length; the number of coproduction partners; and the like. Examples: Bangladesh's total project budget is \$17.85 million over 10 years; Kosovo's is \$1.6 million over 2 years; and South Africa's is \$19.1 million over 10 years. The coproductions receive financing from bilateral and multilateral donors, foundations, corporations, and governments. Some projects also generate revenue from licensing agreements (i.e., in Mexico, licensing accounts for 30 percent of *Plaza Sésamo*'s budget).

### SIZE:

*Direct reach*–156 million children per month in more than 150 countries are reached through video content (this constitutes 16 percent of the global population of children between birth and 7 years of age).

## IMPACT:

Overall learning outcomes\_A meta-analysis found that children in 15 countries who watched Sesame Street gained, on average, 12 percentile points in learning outcomes (including literacy, numeracy, health and safety knowledge, and social reasoning and attitudes), compared with those who do not watch. This impact (an effective size of 0.29 standard deviation) is comparable to that of other early childhood interventions, with scale being its key distinguishing factor. *Literacy and numeracy*-In Bangladesh and Egypt, 4-year-olds who frequently watched Sesame Street gained nearly one year of learning, performing near or at the same level in literacy and mathematics tests as 5-year-olds who did not watch the show or watched the show infrequently. Health knowledge and practices-In Indonesia, children with high exposure to the local Sesame Street performed better on assessments of health knowledge (i.e., identifying body parts or healthy and unhealthy foods) than children with low or no exposure. Children in South Africa and Tanzania showed greater gains in HIV/AIDS knowledge and attitudes after watching Sesame Street than their nonviewing peers. Respect and understanding–In Kosovo, children who watched one of the local versions of Sesame Street were 74 percent more likely to demonstrate positive attitudes toward children from different ethnic backgrounds than those who did not watch. In Egypt, 4- to 6-yearolds who watched frequently scored higher on measures of gender equity attitudes than those who watched less.

## Background

Beginning in the 1960s during the height mothers have low levels of schooling. of the civil rights movement in the United those who are most socioeconomically States, a series of influential studies of disadvantaged, live in rural areas, and/ education in the country demonstrated or are exposed to malnutrition and that upon beginning first grade, lowpreventable diseases) are the least likely income and minority children scored to be enrolled (UNESCO 2006; UNICEF substantially lower on tests of school-2014). This is very alarming, given readiness skills (i.e., letter recognition, that more than half of a child's lifetime counting, self-control) than their white, intellectual capacity is formed by the time middle-class peers (Deutch 1965 in Palmer he or she turns five (Bloom 1964). However, and Fisch 2001; Bereiter and Engelman despite the evidence. ECE continues to be 1966). Worse, studies showed that gaps in a low-priority item in many government school readiness had a cumulative effect: budgets. According to a UNESCO report Children who start primary school with published in 2015, one-fifth of the world's cognitive delays are more likely to go countries-concentrated mostly in Africa on to repeat grades, drop out of school, and the Middle East–have fewer than 30 percent of children enrolled in preschool and engage in risky behavior (Grantham-McGregor et al. 2007 in Mares and (UNESCO 2015). And those opportunities Pan 2013). This then translates even for preprimary education that do exist may further down the life span in adolescence be poorly funded and may be provided and young adulthood into inequalities by caregivers with little or no training (UNESCO 2006). of opportunity that impede the social and economic mobility promised by an In this context, children's educational television programming has emerged in many countries as an important source of ECE-especially in those parts of the world where more preschoolaged children watch television than are enrolled in preschool. Although some studies in the United States have pointed to the potentially negative

education (Engle et al. 2007; Grantham-McGregor et al. 2007; Naudeau et al. 2011; Walker et al. 2011 in Mares and Pan 2013). In short, developmental gaps and disadvantages that could have been filled or reversed by quality early childhood education (ECE) before the child entered primary school are left to grow bigger and bigger. effects of very young children's exposure In recent years, global rates of preschool to television programming, especially the effects of entertainment television enrollment have increased-by 64 percent between 1999 and 2012–helping on children's educational achievements. 184 million children prepare for school studies from around the world have found (UNESCO 2015). However, less than 50 significant positive effects of exposure to percent of children attend a preprimary informative programming on children's education program in most countries, and cognitive skills (i.e., vocabulary, reading, the children most likely to benefit from and mathematics) and school readiness (Linebarger and Walker 2004).<sup>1</sup> This is ECE programs (including those whose

especially the case when programming is child-relevant, age-appropriate, and provides direct educational messaging (Cole, Labin, and Galarza 2008).

Sesame Street has led these interventions, as one of the most widely viewed and recognized children's educational television series in history. The series was conceived against the backdrop of ECE in the United States described above, and its creators envisioned a program that would both entertain and educate, helping to provide ECE learning opportunities to its target audience of preschool-aged children with– especially those underprivileged children who did not have access to preschool education (Fisch 2004).

## Taking Sesame Street around the world

Sesame Street's initial broadcast in the United States in 1969 reached more than 1 million preschoolers by the end of its first season. Forty years later, Sesame Workshop, the nonprofit organization behind Sesame Street, is the largest single informal educator of young children in the world, engaging 156 million children each month in more than 150 countries with all its educational video programming (Cole, Richman, and Brown 2001; Sesame Workshop 2013; and personal communication. June Lee and Jenny Perlman Robinson, April 22, 2015). In Latin America alone, Plaza Sésamo reaches 15 million children a week (Jorge Baxter, interview by Daniela Petrova, March 19, 2015). Though many countries continue to dub Sesame Street into the national language, since the 1970s there have been 39 different international coproductions of Sesame Street, each with its own local name, its own Muppets (i.e., the series' puppet characters), and its own educational objectives designed to meet the educational needs of local children. Today, international versions of Sesame Street are coproduced in Afghanistan, Bangladesh, Brazil, Germany, the Gulf states, India, Latin America (Colombia and Mexico), the Netherlands, and South

Africa, while more countries have ongoing broadcasts of coproductions (personal communication, June Lee and Jenny Perlman Robinson, February 19, 2015).

According to Charlotte Cole, founder of the Blue Butterfly Collaborative and former senior vice president of global education at Sesame Workshop, the preferred method of global expansion for Sesame Workshop was to respond to requests made by international producers and to collaborate with local production teams that created and produced their own local versions, or "coproductions," of the series (Cole 2009). The contextual conditions in which these collaborations have been initiated have varied over the years, and from country to country. For example, the Mexican coproduction, Plaza Sésamo, debuted 43 years ago at a time when the president of Mexico, Luis Echeverria, and other public officials were criticizing private television's content and advertising. Producing Plaza Sésamo was a way for the local producer and broadcaster, Televisa, to respond to these critiques (Baxter 2016). The Israeli and Palestinian coproductions, Rechov Sumsum / Shara'a Simsim, began shortly after the 1993 handshake on the White House lawn between Israeli prime workshop's teacher training program uses minister Yitzhak Rabin and Palestine video training modules to equip educators Liberation Organization leader Yasser with practical strategies and teaching Arafat. A funder approached Sesame practices that help enhance students' Workshop-or. as it was called at the time. experiences in West African classrooms. the Children's Television Workshop-with These modules, each funded by IDP a request for programming that would Foundation, Inc. (a private, grant-making take advantage of this time of hope in the nonprofit), are introduced by a Ghanaian Middle East and help break down cultural teacher-host and two local Muppets, and stereotypes and teach young Israeli and provides guidance on topics like time Palestinian children about each other management, positive discipline, and (Charlotte Cole, interview by Daniela child-centered approaches to learning. Petrova and Jenny Perlman Robinson. Teachers also receive educator guides, March 6, 2015). Also, Sesame Workshop's DVDs, and classroom materials to reinforce first program tackling HIV began in South key messages (Sesame Workshop n.d., Africa in 2002, when Takalani Sesame's a). In India, Sesame Workshop provides South African partners identified the additional support to teachers using need for educational efforts to address accessible platforms like integrated voice HIV/AIDS in a country where many were response systems and text messages infected with or affected by the disease, on mobile phones; teachers can leave but where its stigma fostered silence questions, share best practices, and and misinformation. Several years later, receive reminders about weekly lessons to Kami, the first HIV-positive Muppet, was be conducted (personal communication, created for Takalani Sesame to humanize June Lee and Jenny Perlman Robinson, individuals affected by HIV/AIDS and to November 30, 2015). break the culture of silence around the

disease. As Sesame Street was adapted to new contexts, Sesame Workshop began to notice that many of the vulnerable and In addition to reaching children through various media platforms, Sesame disenfranchised children it aimed to Workshop seeks to involve parents/ reach tended to live in areas lacking caregivers and teachers to promote access to electricity and equipment continued learning in the home and to like televisions and computers. As a reinforce messages in school. For its result, the workshop began to broaden school-based projects, the workshop its content delivery methods to include creates teacher resources (i.e., educator lower technologies delivered through community organizations (Cole 2009). quides or teacher training videos) In India, for example, as part of its efforts to support teachers in using Sesame materials in the classroom (personal to reach all children, including those in communication, June Lee and Jenny urban slums without access to formal preschool education or reliable sources Perlman Robinson. November 30. 2015). The workshop also conducts inof electricity, Galli Galli Sim Sim used a person training sessions with educators, repurposed vegetable cart equipped often using a train-the-trainer model. In with a television set and a DVD player low-cost private schools in Ghana, the to make regular "house calls," engaging children in the narrow alleys of their neighborhood with special screenings and educational activities. Local facilitators enhanced the viewing experience by asking children contentrelated questions, and the program's mobility enabled the educational content to reach numerous childrenincluding two out of three preschoolers in targeted slum areas-who lived in urban slums with narrow alleys that were difficult to navigate (Cole 2009, 173; Sesame Workshop n.d., c). In Afghanistan, the workshop developed its first program where radio and television have an equal role and where production material for the two mediums is developed in parallel, rather than one adapting material from the other. And in Mexico, starting in the early 1990s, Plaza Sésamo began outreach efforts using video content in classrooms as a way to increase impact and to engage the community. Over time, these efforts evolved to include books, board games, posters, storybooks, and community events in various institutional settings, such as schools, community centers, and hospitals. By the mid-2000s, Plaza Sésamo had launched several largescale community engagement programs in countries throughout Latin America. These projects focused on concerns relevant to the local population, such as health (Colombia and Mexico), road safety (Costa Rica and Mexico), and disaster preparedness (Chile, Colombia, and Mexico) (Jorge Baxter, interview by Daniela Petrova, March 19, 2015).

In the past few years, Sesame Workshop has also introduced a shift in emphasis from knowledge building to behavioral change, and it has launched a few global-themed initiatives that respond

to shared issues across a number of countries. According to Stephen Sobhani, the workshop's former vice president of international social impact and philanthropy, research revealed that some countries share similar needs in areas of health or ECE; having a project respond to these needs collectively across countries could reach larger numbers of children while lowering project costs (Stephen Sobhani, interview by Daniela Petrova, March 24, 2015). One such project-Cleaner, Healthier, Happier, funded by the Bill & Melinda Gates Foundation-is a multimedia, research-driven sanitation and hygiene project targeting children (ages 3 to 7 years) and their caregivers in Bangladesh, India, and Nigeria. The project uses a combination of mass media shared across these countries and community-based interventions unique to each country. In-country research helps to identify in-country strengths and infrastructural limitations, in order for the program's delivery methods to be tailored to suit each country's unique contextual conditions. In Bangladesh and India, for example, Sesame Workshop organizes community viewings of video content on sanitation and hygiene, accompanied by print materials and mediation by a trained facilitator. In Nigeria, the project takes the form of a school-based intervention with a series of comic books, theater activities, and a DVD (Sesame Workshop 2016). Across all three countries, the program uses a shared girl Muppet named Raya, which the workshop created to help give voice to girls, in response to evidence that issues of sanitation and access to water disproportionately affect girls and women (Nada Elattar and Stephen Sobhani, interview by Daniela Petrova, March 24, 2015).

## Impact and evidence of success

Sesame Workshop has benefited from more than 10,000 children in 15 countries (low-, than a thousand studies (both proprietary middle-, and high-income countries) outside the U.S., and found significant positive and independent) focusing on Sesame Street, which have made it the most researched effects of watching Sesame Street, or one television series, and its impact on children of its international coproductions, across one of the best-documented in the history a number of learning outcomes, including of the media (Cole 2009). The workshop literacy and numeracy; learning about itself focuses on four broad categories of science, the environment, and health and learning-literacy and core academic skills safety-related practices like hand washing; (i.e., science and mathematics, financial and pro-social reasoning and positive literacy); emotional well-being (i.e., resilience); attitudes toward out-groups associated health and wellness (i.e., healthy habits, with long-standing hostilities. Specifically, disease-specific knowledge and prevention, the meta-analysis found a 12-percentile road safety,); and pro-social interactions gain in such learning outcomes made by children who watched more Sesame Street, (i.e., mutual respect and appreciation of differences, destigmatization of diseases compared with other children who watched and disability, gender equality)-leaving less or with themselves when younger. This each coproduction to identify specific amounts to an effect size of 0.29 standard learning goals (Cole, Labin, and Galarza deviation, which is comparable to other 2008; Cole, Kotler, and Pai 2010; Sesame early childhood interventions designed to improve the quality and amount of cognitive Workshop n.d., d). In the U.S. context, both stimulation available to children, such as short-term and long-term studies have shown that the program is an effective on-site preschool programs and training learning tool for children, especially those provided to caregivers (Mares and Pan from disadvantaged backgrounds, with 2013). The primary difference between these interventions and Sesame Street is the sheer the academic advantages associated with viewing the series as preschoolers, which last scale at which Sesame Street operates. well into adolescence (Anderson et al. 2001; Examples of specific country outcomes include a longitudinal study in Bangladesh of more than 6,000 children, which found that children who had been exposed to Sisimpur (the local version of Sesame Street) made gains in literacy, mathematics, and sociocultural skills equivalent to those of children one year older with no exposure to Sisimpur. Gains in letter recitation, vocabulary, counting, and sociocultural knowledge were made over a 2-year period. Moreover, children in rural areas and lower-income urban households in Bangladesh benefited the most from watching the series (Lee

Wright et al. 2001; and Kearney and Levine 2015). Globally, research focusing on the workshop's international coproductions has demonstrated that the model has a positive impact across cultures, including the effect of introducing educational content that has not been addressed previously by the original U.S. production, such as an emphasis on aesthetics in Zhima Jie (China), or on preparing children for life in a new, open society in Ulitsa Sezam (Russia) (Fisch 2004). A recent meta-analysis synthesized the results of 24 studies conducted with more

2008). Similar results in math and literacy have been found among 4-year-olds who watched Alam Simsim in Egypt, compared with 5-year-olds who watched little or none of the series (Sesame Workshop n.d., b). And in Indonesia and Tanzania, research studies found significant postintervention improvements among children who regularly watched Jalan Sesama (Indonesia) or Kilimani Sesame (Tanzania) in tests of such early cognitive skills as letter recognition, number recognition, and counting, as well as health and safety knowledge, social development, and environmental and cultural awareness (Borzekowski and Macha 2010; Borzekowski and Henry 2011). In Colombia, a study showed that Sesame Workshop's classroom educational materials (specifically, the workshop's Healthy Habits storybooks, posters, video games, and songs) improved knowledge, attitudes, and habits related to healthy diet and active lifestyles, and that changes were sustainable over one year. Researchers attributed the success of the intervention to its "fun while learning" approach, which may have helped to increase children's attention and motivation

In addition, Sesame Workshop has helped to raise awareness of the importance of ECE and children's development around the world, including in Bangladesh, India, and the Latin American countries. The workshop accomplishes this advocacy through both top-down and bottom-up strategies-for example, by including Ministry of Education officials in local advisory boards; disseminating research on its programs' impact to key decisionmakers; producing public service announcements on critical issues in ECD; and engaging with teachers, caregivers, parents, schools, and local leaders in community events (personal communication, Jorge Baxter and Jenny

to learn (Céspedes et al. 2013).

Perlman Robinson, May 29, 2015; Kibria and Jain 2009). In Bangladesh, community outreach efforts that accompanied community screenings of Sisimpur were associated with a rise in consciousness among family members, especially mothers, about how they interacted with their children. and an increased appreciation for actively engaging with their children (i.e., through storytelling) (Kibria and Jain 2009; Kibria n.d.). Sesame Workshop has also successfully influenced national ECD policy; for example, in South Africa, its educator training was registered as a unit standard by the South African Qualifications Authority as a Level 5 training for a Professional Diploma in Education (personal communication, June Lee and Jenny Perlman Robinson, June 2, 2015).

As a testament to its positive impact, Sesame Workshop's portfolio of international children's television programming has also received several national and international accolades. Among these, Rechov Sumsum (Israel) won the Japan Prize Foundation's President Prize in 1998; in 2005, Takalani Sesame's "Talk to Me" television special (South Africa) was honored with the Governor of Tokyo Prize in the Japan Prize contest, a George Foster Peabody Award, a Golden Hugo from the Chicago International Film Festival, the Gold Intermedia-Globe from the World Media Festival, and the Rose d'Or Social Awareness Award; China's ZhimaJie won the Hugo Award in 2011 for its innovative and outstanding contributions to television; and in 2010, the Indonesian Ministry of National Education awarded Jalan Sesama a certificate of appreciation for its positive child programming. In 2014, "Plaza Sésamo: Monsters on the Web" (Colombia) was nominated for an International Emmy in the category of best international children's program (Cole and Lee 2016).

1969 •···· by the end of its first seasor

#### 1974 •·····

#### 1995 •····· Sesame Street has aired in more than an estimated 120 countries.

#### 2001 •·····

'G' Is for Growing: Thirty Years of Research on Children and

#### 2006 •·····

Galli Galli Sim Sim launches in India. The World According to Sesame Street, a documentary about Sesame

> 2014 •···· Sesame Street launches its 45th season in the U.S.

## Timeline of key events

#### 

Joan Ganz Cooney and Lloyd Morrisett, who will become Sesame Street's cofounders, conduct a feasibility study on children and

#### • 1972

Sesame Workshop's first international coproductions air in Brazil (Vila Sésamo) and in Mexico (Plaza Sésamo)

#### 

Coproduction of Sesame Street in Israel, the West Bank, and

#### • 2000

#### • 2005

Sisimpur airs in Bangladesh

#### • 2011 Baghch-e-Simsim debuts in Afghanistan.

#### 2016

The Sesame Effect: The Global Impact of the Longest Street in the World is released.

## Key drivers behind scaling impact

Given that Sesame Street is one of the best-researched and best-documented children's educational programs in the history of television, what has it taught us about scaling up early childhood education and learning? According to those at Sesame Workshop, the idea was simple: Use television to help children learn. This idea was particularly revolutionary and timely for children who had little or no access to ECE opportunities but had ample access to television or other media technology. Moreover, by targeting preschool-age children through a device to which they were already drawn, the workshop's primary task was to create fun and engaging content-something that was not "preachy or teachy"-and characters with whom children could establish an emotional connection (Rosemarie Truglio, interivew by Daniela Petrova and Jenny Perlman Robinson. March 5, 2015). In short, Sesame Street

needed to be comprehensive but unique enough so children everywhere would respond to it (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6, 2015; Jorge Baxter, interview by Daniela Petrova, March 19, 2015; and Stephen Sobhani, interview by Daniela Petrova, March 24, 2015).

To achieve this, Sesame Workshop's experimental approach, collaborative nature, and responsiveness to local needs have functioned as key drivers of the Sesame Street model for scaling up this program around the world. In addition, the workshop's scalingup journey has benefited from a confluence of a number of other factors-including its timing in the market of children's television. its emphasis on creating locally relevant content, its integration of research throughout the production process, its network of committed and like-minded partners, and its diverse approach to sustainability.

### Being at the right place at the right time

First and foremost, one key factor contributing to Sesame Workshop's global expansion was its sheer timing. First, the workshop was in the right place at the right time in terms of the market evolution of television (Jorge Baxter, interview by Daniela Petrova, March 19, 2015). In the words of the workshop's visionary founder, Joan Ganz Cooney, "The wasteland of children's television [in the 1960s United States] was too vast, and the yearning for something better too great" (Cooney 2001, xi). Sesame Street was the first of its kind, combining imaginative and innovative content with an explicit educational focus (Jorge Baxter,

interview by Daniela Petrova, March 19, 2015). And its early entry into the market gave it a significant competitive edge within the space of children's television.

Globally, the timing of Sesame Street has also been important to its success. According to Shari Rosenfeld, senior vice president of international social impact at Sesame Workshop, when Sisimpur first aired in Bangladesh, the television landscape was wide open. There was only one TV channel, which made it easy for the workshop to gain traction (Shari Rosenfeld, interview by Daniela Petrova, March 31, 2015). In India,

television each week (Wright et al. 2001). In the 1960s, as television was becoming ubiquitous in the United States, and later across low-income countries around the world, television was becoming the primary, if not the only source of informal education or cognitive stimulation for preschool-aged children (Mares and Pan 2013). Data from the 1970s indicate that between 28 and 36 percent of children between the ages of 2 and 5 watched Sesame Street, compared with 9 percent, 19 percent, and 57 percent of children ages 3, 4, and 5, respectively, who attended preschool and kindergarten at the time (Cook et al. 1975 in Kearney and Levine 2015). When Sisimpur debuted in Bangladesh, roughly 10 percent of preschool-aged children were enrolled in preschool, whereas nearly 50 percent of children watched television on a daily basis (Khan et al. 2007). Television thus posed the perfect opportunity to reach millions of children.

Galli Galli Sim Sim debuted in a dynamic, competitive, emerging market environment, which created its own set of challenges. However, the conditions were nonetheless conducive to introducing the television series. There was a need; it was a time of change for the country, which had recently seen education take central focus as the ticket out of poverty (Sashwati Banerjee, interview by Daniela Petrova, March 19, 2015). And as its brand continued to grow, local teams found it easy to secure meetings with high-level officials who were eager to associate with a well-regarded brand (Shari Rosenfeld, interview by Daniela Petrova, March 31, 2015). Second, Sesame Workshop was in the right place at the right time in terms of consumer television viewing trends. In lowincome communities in the United States. for example, researchers estimated that children between the ages of 2 and 3 years watched, on average, 16 hours of

#### Balancing core nonnegotiables with tailored, culturally relevant content

Today, Sesame Workshop's international more than 40 years; to communicate a coproductions retain the essence of the clear set of values to parents, educators, original U.S. version-its style, target age governments, and partners; and to create group, core learning goals, and core a recognizable global brand (Jorge Baxter, principles (to use media to meet the interview by Daniela Petrova, March 19, educational and developmental needs of 2015). At the heart of this balancing act is young children and to develop engaging the Sesame Street model for international adaptation-a collaborative process of content that connects emotionally with preschool-aged children). At the same "inform, improve, measure, and repeat" time, coproductions are tailored to speak that takes place no matter the country directly to the unique educational needs context among a team of local educational of local children and their caregivers. This content specialists (ranging from cultural balance between maintaining Sesame's studies to sociology, gender studies, art, core nonnegotiables and remaining music, health and environmental studies, flexible and adaptable has helped the mathematics, and literacy), researchers, workshop to sustain Sesame Street's child psychologists, and television educational integrity and guality for producers. The workshop's philosophy has been to steer away from imposing American sensibilities on its international coproductions, aiming instead to provide a framework for an educational program that could be created for each particular country by local educators and an incountry production team that would respond to local educational needs (Fisch, Truglio, and Cole 1999).

Briefly, Sesame Street's coproductions begin with a needs assessment conducted at the initiation stage to determine whether there is support for the project among educators, government entities, and within the broadcasting and production communities (Cole, Richman, and Brown 2001). For example, when invited to explore the potential for creating a program in South Africa in the early 1990s, Sesame Workshop's team identified a clear need for the project after completing an in-country fact-finding trip; but due to the political environment at the time, it decided to wait until the end of apartheid, when it would be more feasible to begin a production project (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6. 2015). In many other instances, feasibility assessments have revealed a need for high-quality educational programs for young children, and that a Sesame Street project would help to fill an important gap in ECE.

The needs assessment is followed by a curriculum seminar or advisory meeting, during which educational advisers and producers discuss the educational priorities of children in the country and present the coproduction's educational framework (or "curriculum"), which outlines the project's educational objectives, including the specific messages that educators want to convey to children (Fisch, Truglio, and Cole 1999). This framework serves as the backbone for the coproduction, as well as the foundation upon which all production materials and further research are based (Cole 2009).

Once the objectives have been identified, local producers and writers are then responsible for developing educational content and the creative elements of the production, adhering to Sesame Workshop's consistent style (i.e., a colorful set, animations, live action films, and the whimsical, humorous Muppets puppets) (Rosemarie Truglio, interview by Daniela Petrova and Jenny Perlman Robinson, March 5, 2015; Jorge Baxter, interview by Daniela Petrova, March 19, 2015). Education specialists are an integral part of the production process, reviewing scripts with the production team and providing input on educational integrity, and developmental and cultural appropriateness. And, when needed, Sesame Workshop provides training in puppetry and coaching for new puppeteers, sometimes in collaboration with other coproduction teams (Rosemarie Truglio, interview by Daniela Petrova and Jenny Perlman Robinson, March 5, 2015). Recently, for example, new puppeteers playing Zari, Sesame Workshop's first airl Muppet in Afghanistan, trained with seasoned puppeteers from the India team in Delhi. Meanwhile, researchers provide feedback on the appeal and comprehension of program's components and segments through formative research with children (and, where appropriate, adults) that is conducted throughout the production process. When possible (i.e., when resources allow), third-party evaluators are commissioned to assess the program's educational impact at the end of the broadcast season or at of Panamanian, Argentinean, and mostly the end of the project. Such summative Mexican performers. A board of local evaluations are a rigorous way to examine advisers determined the coproduction's the program's effectiveness and improve educational goals. And local education future programming (Fisch, Truglio, and specialists developed a curriculum that Cole 1999; Cole, Richman, and Brown differed from the U.S. production, in that 2001). it included greater emphasis on critical thinking and taught literacy using a more Together, these core nonnegotiable contextual approach that stressed whole components-a needs assessment: words, phrases, and sentences rather than formative research; curriculum-driven individual letters (Jorge Baxter, interview programming; a collaborative production by Daniela Petrova, March 19, 2015).

process; country-relevant content; a consistent style; and impact evaluations-According to Jorge Baxter, the workshop's Latin America director of social impact constitute the Sesame Street model. This model allows every coproduction around and philanthropy, the decision to create the world to share Sesame Street's look and content matching the priorities and needs of local children was crucial for the feel. But its production is highly flexible, its application is different from context globalization of Sesame Street. Children to context, and its content is tailored to respond to things that match their reality, and to the characters, children, and and delivered according to the unique educational needs of children and the adult actors who look and talk like them. pedagogical norms of each country and Striking a balance between Sesame's core culture. For example, *Plaza Sésamo* (Latin nonnegotiables and its flexible adaptation America) features regional settings, music, has enabled Sesame Workshop to and characters created specifically for maintain the essence and integrity of the children in the Latin American countries. program, but also to ensure local appeal and relevance (Jorge Baxter, interviews by It also includes local puppeteers (trained by Sesame Workshop) and a mixed cast Daniela Petrova, March 5 and 19, 2015).

### Conducting research, from inception through production and beyond

The processes behind Sesame Workshop filmmakers to determine whether television have been described as an arranged could serve as an educational tool (Fisch marriage between research and 2004). Even Joan Ganz Cooney, one of production (Cooney 2001). That is, Sesame's founders, has said that "without research, both formative and summative, research, there would be no Sesame" has played a prominent role in the Sesame (Cooney 2001). Street model from the inception of a new Every season of Sesame Street is an project partnership through content creation, production, and beyond.<sup>2</sup> Even experiment, as is every coproduction, before starting the program in the United considering how each is specifically States, the workshop's founders consulted adapted, created, and designed to meet with child psychologists, educators, and local needs and contextual conditions. As Stephen Sobhani, put it, "At Sesame Workshop, we don't talk about children: we talk to children" (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6, 2015; Stephen Sobhani, interview by Daniela Petrova, March 24, 2015). Formative research during the production process and a summative evaluation at the end of the season or project are thus vitally important in providing feedback to Sesame Street's creators and production teams. It is particularly important that formative studies bring the voice of the child into the production process and allow the team to learn directly from its audience. So, though the Sesame Street model is the cornerstone of Sesame Workshop's global success, the glue holding it all together is the integration of research into the production process, mixed in with the spirit of experimenting with content, testing new ideas, and critically examining its impact.

The centrality of research has also enabled Sesame Workshop to learn from its mistakes and to make important course corrections as necessary. To illustrate, coproduction teams need to know whether characters and the studio sets they inhabit reflect the particular national culture. In Mexico, one of the first characters designed for Plaza Sésamo was a crocodile. But research showed that children were scared of crocodiles. so the crocodile was quickly replaced with a local version of Big Bird (Jorge Baxter, interview by Daniela Petrova, March 19, 2015). In South Africa, to reflect the fact that the country has 11 official languages, the coproduction team initially had different characters speaking in different languages so that the conversation could be understood as long as children

understood at least one of the languages. But formative research showed that children focused on content presented in their home language. The team then modified the approach. Although the program still includes "code-switching," whereby different characters may speak more than one language within a given conversation, there is greater diversity with the core language used in a given episode. Whereas English was initially the core for all episodes, entire episodes are now aired in different languages on different days (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6, 2015).

Formative research has allowed coproduction teams to fine-tune messages during the production process. According to Ellen Buchwalter, vice president of international philanthropic development at Sesame Workshop, "we may write a wonderful script, but when we test it on kids, it can fall flat. So we have the opportunity to go back to the proverbial drawing board and make changes. For instance, in content addressing healthy habits, researchers demonstrated that the original message of "eat your broccoli" was not working with children, so it was changed to "eat all of your colors," a much more effective message among the show's target audience (Ellen Buchwalter and Anita Stewart, interview by Daniela Petrova and Jenny Perlman Robinson, March 26, 2015).

The introduction of new technology for content delivery has necessitated the development of new methods of research. For example, a decade ago, when Sesame Workshop started the production of radio content for Takalani

Sesame in South Africa, the team had to Furthermore, when questioning children, develop new approaches for observing the team had to introduce different types of prompts from the ones used to study children's interactions with radio and reactions to television content (Cole their learning from it (Desmond et al. 2000). Observation techniques, such 2009). The same has been true with the as eyes-on-screen that had been used introduction of other technology, such as in television, were useless for radio. computer games and tablets.

### Identifying like-minded partners

From its inception, Sesame Street has As the curriculum and goals are channeled the collaborative expertise of determined for each country, Sesame educators, artists, researchers, television Workshop looks for partners who share producers, and parent outreach workers to the same goals, are willing to invest bring quality early childhood development in the program, and can be effective programming to many communities local "stewards" of the brand (personal around the world to countries where none communication, Jorge Baxter and Jenny formally exists. But this collaboration Perlman Robinson, May 29, 2015). To extends beyond the programming. The illustrate, the Takalani Sesame project long-term success of Sesame Workshop in South Africa began with support has also depended on the support of from the U.S. Agency for International a broad base of partners, including Development. But from its inception, the broadcasters, local production partners, program also formed a partnership with government ministries, the education and Sanlam, a financial services company academic communities, funding agencies, with deep roots in South Africa. Sanlam local nongovernmental organizations, and fully embraced the show and its team, other private and public partnerships. extending its commitment beyond funding The workshop's efforts would not be broadcasts to organizing community events, providing workshops for parents possible without the cooperation of these networks of key stakeholders at and caregivers, and distributing the local level. Especially important educational publications. According to have been the workshop's partnerships Sesame Workshop, Takalani Sesame and with private and public actors that could Sanlam have become synonymous in the also invest financially in the program, minds of South Africans, contributing including the Children's Investment Fund to Sanlam's image as a caring company Foundation, which invested in Sesame (Ellen Buchwalter and Anita Stewart, Workshop India; the Bill & Melinda interview by Daniela Petrova and Jenny Gates Foundation, which invested in Perlman Robinson, March 26, 2015). sanitation and hygiene projects in Bangladesh, India, and Nigeria; and In Latin America, Plaza Sésamo's project team has learned that it is not enough MetLife Foundation, which invested in a financial empowerment project in nine to engage teachers and communities countries (Jorge Baxter, interview by by supplying them with materials and Daniela Petrova, March 19, 2015). expecting that these will be used. Rather,

the team has learned to plan in advance how to distribute content and how to support teachers, especially in helping them integrate materials into their lessons. Now, before undertaking a project, Plaza Sésamo's team-as do all project teams around the world-ascertains whether it has the right partners, networks, and local infrastructure to implement the project, aiming to build local capacity and sustainability into its programs. The team also tries to match donor opportunities with its longer-term educational and business agendas. Learning from their experiences, the team has developed specific criteria to enable it to better select and work with partners (Jorge Baxter, interview by Daniela Petrova, March 19, 2015).

According to Sesame Workshop, its partners like the organization's processfrom the needs assessment and formative research to the impact evaluation. They

appreciate the workshop's long-term view and planning and its broad reach, as well as how it has scaled up projects and has proven its impact (Ellen Buchwalter and Anita Stewart, interview by Daniela Petrova and Jenny Perlman Robinson, March 26, 2015; Stephanie Drozer, interview by Daniela Petrova, April 10, 2015). It also helps that project teams are in constant communication with their partners, building relationships and providing the right level of support for each team. To a degree, the workshop and its programs have become integral components of their partner organizations, sometimes to the point where the show has become an important part of the partner organization's corporate social investments, as has been the case for Takalani Sesame and its corporate partner and donor, Sanlam, in South Africa (Ellen Buchwalter and Anita Stewart. interview by Daniela Petrova and Jenny Perlman Robinson, March 26, 2015).

### Planning for financial sustainability

According to its creators, Sesame Street started under close-to-ideal conditions. At its inception, Sesame Workshop received a grant of \$8 million from the Carnegie Corporation for a 2-year project. This generous funding enabled the team to spend nearly 18 months planning and experimenting with different program approaches before debuting on the air. It also enabled the team to enlist a major promotional and public relations firm and to involve the Education Testing Service, a prominent third-party evaluator, to assess the series' educational effectiveness (Palmer and Fisch 2001). Similarly, some of the workshop's major international coproductions were initiated at the request of a funder or

a broadcaster that was willing to fund the project itself-or at least had a way to fund the project. Over the years, the workshop's projects have received funding from a range of corporate, broadcasting, foundation, government, and bilateral/multilateral sponsors. And as the workshop's brand became more closely associated with promoting educational aims around the world, its funding sources began to see a shift toward more grants from international development. It even began to write proposals seeking funding for specific projects with development institutions (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6, 2015).

When it comes to sustainability, Sesame programs. Sesame Workshop India and Workshop approaches the question Sesame Workshop Bangladesh-both of longevity in two ways: Is the goal of which produce local coproductions to sustain a project over time; or is it and implement numerous school and to develop a certain set of skills? The community projects-are examples of workshop has been around for more Sesame Workshop's commitment to a than 40 years, but some projects came long-term in-country presence. to a close because they exhausted their purpose and there was no longer a In the case of Mexico, the emergence need, or because they reached the end of regional cable broadcasters in the of funding. At the end of the day, the 1990s led the national coproduction's leaders to rethink Plaza Sésamo as workshop aims to build capacity through training and education so that its a regional program appealing to international project teams will become audiences throughout Latin America. self-sustaining; whether this means that This helped to distribute the cost of a program ends upon losing it funding content production across partners with or continues to seek additional sources similar content needs and sensibilities of funding depends on its context and (Jorge Baxter, interview by Daniela Petrova, March 19, 2015). Also, the first goals (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman three seasons of Plaza Sésamo in Mexico Robinson, March 6, 2015). were funded by large corporate donors. When this funding was exhausted, the In the case of the latter. Sesame coproduction rebroadcasted the first Workshop has explored different three seasons while the team searched approaches to financial sustainability. for additional revenue and a sustainable In most cases, this has meant forming means of support. Several years later, partnerships with a local organization Plaza Sésamo's business model shifted to that has a strategic interest in the include ancillary business opportunities, program, as in the case of Kosovo and including a licensing component and Northern Ireland, where local partners content distribution. At this time, market had the incentives to invest the time and research proved an invaluable addition energy needed to keep the program to help leverage the power of Sesame's going. For Kosovo, because the goal for brand to generate revenue with a line of toy merchandise manufactured by the coproduction was to help children develop a specific body of skills and Mattel. Licensing soon came to account developmental assets, sustaining the for one-third of Plaza Sésamo's revenue. program meant ensuring that episodes Today, as the media landscape in Latin had a long shelf life and could be America continues to be flooded from rebroadcast even after production abroad with children's brands. Plaza had ceased (Shari Rosenfeld, interview Sésamo's business model is again by Daniela Petrova, March 31, 2015). shifting, to include new sources of In other cases, planning for financial support through partnerships with local sustainability has meant establishing ingovernments and foundations (Jorge country entities that can seek funding, Baxter, interview by Daniela Petrova, build partnerships, and implement March 19, 2015).

#### Maintaining flexibility to adapt and change

Sesame Workshop's flexibility to change with the times and to accommodate different approaches have been essential to its long-term sustainability and its expansion to international contexts (Cole 2009; Jorge Baxter, interview by Daniela Petrova, March 19, 2015). This has included making changes to its content, format, and delivery; experimenting with technology, different financing models, and auxiliary experiences like a theme park; and forging new partnerships outside its core network of supporters, like HBO in the United States. As mentioned earlier in this study, Sesame Workshop's educational curriculum has even expanded to include both an emphasis on building knowledge and on motivating behavioral change, as illustrated by its global-themed initiatives in worldwide health, financial empowerment, and sanitation and hygiene (Jorge Baxter, interview by Daniela Petrova, March 19, 2015).

Sesame Workshop's success in some of the most challenging locations around the world can also be attributed to its flexibility and adaptability. For instance, its coproductions in conflict or postconflict areas presented numerous challenges to which teams had to respond, such as logistical issues (i.e., travel and mobility), interpersonal issues (i.e., dealing with people holding different opinions on an issue), and finding diverse talent. Other challenges have included navigating government bureaucracies and changing political relations between groups. In such cases, Sesame Workshop's teams have had to adapt their production process to the conditions, changing the method of engagement (Charlotte Cole, interview by Daniela Petrova and Jenny Perlman Robinson, March 6, 2015). To illustrate, in the first Israeli-Palestinian program, the coproduction team initially imagined a shared street between Israeli and Palestinian characters, but it quickly learned that there was no such space where the two sides were comfortable sharing. In the end, the producers created a Palestinian street and an Israeli street, and the characters met by invitation. When the coproduction team later worked on the Israeli-Palestinian-Jordanian version of the series, the political realities on the ground had changed dramatically, so it was no longer authentic to show Muppets and children meeting each other, even by invitation. In the words of Shari Rosenfeld, "We try to be inspirational, but we cannot be inauthentic!" (Shari Rosenfeld, interview by Daniela Petrova, March 31, 2015). As a result, the team had to adapt its programming, and it eventually created a parallel version for each broadcast. The team produced local live action films and animation content, which were then shared across the different series.

Although Sesame Workshop started with a television program, it has since become an interactive multimedia platform that uses technology ranging from high-technology devices (i.e., tablets and smartphones) to relatively low-technology ones (i.e., print materials, DVDs, community and commercial radio, and bioscopes—a hand-powered slideshow viewer, and feature phones). As the workshop looks forward to the next 40 years, one of its greatest challenges will be keeping children's attention in a crowded media market (Jorge Baxter, interview by Daniela Petrova, March technologies such as the Internet, mobile 19, 2015). In order to stay relevant, the phones, and social media among young children and their families (Jorge Baxter, workshop's leaders recognize that it must continue to adapt to a changing interview by Daniela Petrova, March 19, media landscape by diversifying its 2015; Cole and Lee 2016). Perhaps this products and delivery methods. With the model will become Sesame Workshop's emergence of new digital platforms, such new terrain, as the population of digital as YouTube and Netflix, the workshop natives continues to explode around the has experimented with other ways to globe. deliver its educational content, including online, mobile devices, and touchscreens Sesame Workshop's global social impact work has continued to respond in multiple languages (Cole 2009). This to the changing media environment has not only enabled the workshop to widen the number of devices used, and the goals of the international but also to explore the potential of development community. Its most recent each medium to enhance learning. In focus-access to quality early education, some cases, efforts have even been critical health lessons, and providing tools for vulnerable children-reflects made to take a transmedia approach, where story arcs and narratives are important areas where it has the greatest potential to make a meaningful spread across communication channels difference in the lives of children and (television, the Internet, digital and print media, etc.), so the target audience can families. Its initiatives have grown well have multiple touchpoints and multiple beyond television and mass media, to encompass programs implemented brand experiences (Baxter 2016). In by local partners in schools and Colombia, for instance, the workshoptogether with the Ministry of Technology, communities. The breadth and depth Communication, and Information and of Sesame's work have endured for over Canal Tr3ce-created "Plaza Sésamo: four decades, reaching many millions of Monsters on the Web" to promote children where they are with engaging digital literacy and the safe use of new and meaningful content.

# Lessons learned

- Sesame Workshop scaled a simple idea: Use television to help children learn, especially those with little or no access to early childhood education. During a time when social inequalities were being tagged to inequalities in education, and inequalities in education were being tagged to gaps in school readiness, Sesame Street's mission to prepare preschool-aged children for school entry became an instant hit.
- A cornerstone of Sesame Street's successful adaptation around the world has been the local application of its core framework and production plan, or the Sesame Street model. But, by striking a balance between maintaining the model's core nonnegotiables and remaining flexible and adaptable, Sesame Workshop has been able to preserve and retain ownership over its brand while enabling a specific country's coproduction teams to tailor the content, pedagogy, and messages to the unique educational needs and goals of its children.
- Sesame Workshop benefited tremendously by being in the right place at the right time. Its timing could not have been more perfect, both in terms of its early entry into the landscape of children's programming, which gave it a competitive edge, and the explosion of cable television in the lives of consumers, which gave it tremendous reach.
- Research has played a prominent role, from Sesame Workshop's inception throughout the production process and beyond. Not only does the workshop use formative research to guide and inform the production process, it also uses summative research to generate rigorous evidence and data that demonstrate impact and inform modifications. Unafraid to make mistakes and viewing failure as opportunity, the workshop continues to grow and improve its programming in ways that are responsive to the needs of children.
- The global success of Sesame Street has depended on a broad base of partners, including in-country broadcasters, local production teams, government ministries, the education and academic communities, funding agencies, local nongovernmental organizations, and other private and public partnerships. The workshop's success depends on a large network of key stakeholders at the local level. Through relationship building and constant communication with its funders, the funders begin to see the

workshop and its programs as integral parts of their organizations. At the same time, building a network of partners in a particular country allows projects to respond to local needs and contexts.

as experimenting with technology and different financing models.

• Sesame Workshop has been successful for more than 40 years across many different contexts (including both inside and outside the classroom, postconflict areas, urban slums, and rural communities) because of its underlying ability to change with the times and to adapt. This has meant diversifying its products and delivery methods, as well

## References

Anderson, D. R., A. C. Huston, K. L. Schmitt, D. L. Linebarger, and J. C. Wright. 2001. "Early Childhood Television Viewing and Adolescent Behavior: The Recontact Study." *Monographs of the Society for Research in Child Development* 66, no. 1: 1–147.

Baxter, Jorge. 2016. "Building Relevance and Impact: Lessons of Sustainability from Plaza Sésamo in Mexico and Beyond." In The Sesame Effect: The Global Impact of the Longest Street in the World, edited by Charlotte F. Cole and June H. Lee. New York: Routledge.

Bereiter, C., and S. I. Engelman. 1966. *Teaching Disadvantaged Children in Preschool*. Englewood Cliffs, NJ: Prentice Hall.

Bloom, B. S. 1964. Stability and Change in Human Characteristics. New York: Wiley.

Borzekowski, Dina L. G., and Holly K. Henry. 2011. "The Impact of *Jalan Sesama* on the Educational and Healthy Development of Indonesian Preschool Children: An Experimental Study." *International Journal of Behavioral Development* 35: 169–79.

Borzekowski, Dina L. G., and Jacob E. Macha. 2010. "The Role of Kilimani Sesame in the Healthy Development of Tanzanian Preschool Children." *Journal of Applied Developmental Psychology* 31, no. 4: 298–305.

Céspedes, Jaime, et al. 2013. "Targeting Preschool Children to Promote Cardiovascular Health: Cluster Randomized Trial." *American Journal of Medicine* 126, no. 1: 27–35.

Cole, Charlotte F. 2009. "What Difference Does It Make? Insights from Research on the Impact of International Co-Productions of Sesame Street." *NHK Broadcasting Studies* 7, 157–77. https://www.nhk.or.jp/bunken/english/reports/pdf/09\_no7\_10.pdf.

Cole, Charlotte, Jennifer Kotler, and Seeta Pai. 2010. "Happy Healthy Muppets': A Look at Sesame Workshop's Health Initiatives around the World." In *Igniting the Power of Community: The Role of CBOs and NGOs in Global Public Health*, edited by P. A. Gaist. New York: Springer.

Cole, Charlotte F., Daniel B. Labin, and Maria del Rocio Galarza. 2008. "Begin with the Children: What Research on Sesame Street's International Coproductions Reveals About Using Media to Promote a New More Peaceful World." *International Journal of Behavioral Development*, 32, no. 4: 358-65.

Cole, Charlotte F., and June H. Lee. 2016. The Sesame Effect: The Global Impact of the Longest Street in the World. New York: Routledge.

Cole, Charlotte F., Beth A. Richman, and Susan A. McCann Brown. 2001. "The World of Sesame Street Research."

In "G" Is for Growing: Thirty Years of Research or Rosemarie Truglio. Mahwah, NJ: Erlbaum.

Cooke, Thomas D., et al. 1975. "Sesame Street" Revisited. New York: Russell Sage Foundation.

Cooney, Joan G. 2001. "Forward." In "G" Is for Growing: Thirty Years of Research on Children and 'Sesame Street," edited by Shalom Fisch and Rosemarie Truglio. Mahwah, NJ: Erlbaum.

Desmond, Snoeks, Juliana Seleti, Patricia Mthethwa, and Tamsyn Seiman. 2000. Testing Testing: Exploring Ways of Researching Radio with Preschoolers. Durban: Vuleka Productions.

Deutch, M. 1965. "Race and Social Class as Separate Factors Related to Social Environment." *American Journal of Sociology* 70: 474.

Engle, P. L., et al. 2007. "Child Development in Developing Countries: Strategies to Avoid the Loss of Developmental Potential in More Than 200 Million Children in the Developing World." *The Lancet* 369: 229–42.

Fisch, Shalom M. 2004. Children's Learning from Educational Television: Sesame Street and Beyond. London: Routledge.

Fisch, Shalom M., Rosemarie T. Truglio, and Charlotte F. Cole. 1999. "The Impact of Sesame Street on Preschool Children: A Review and Synthesis of 30 Years' Research." *Media Psychology* 1, no. 2: 165–90.

Grantham-McGregor, S., et al. 2007. "Developmental Potential in the First 5 Years for Children in Developing Countries." *The Lancet* 369: 60–70.

Kearney, Melissa S., and Phillip B. Levine. 2015. *Early Childhood Education by MOOC: Lessons from Sesame Street*. NBER Working Paper 21229. Cambridge, Mass.: National Bureau of Economic Research. https://www.wellesley.edu/sites/default/files/assets/site/files/wellesleysesamestudy\_full.pdf.

Khan, M. S., H., N. Chakaborty, A. P. M. Rahman, and T. Nasrin. 2007. 2007 Follow-Up (Wave II) Evaluation of the Reach and Impact of Sisimpur: A Technical Report. Dhaka: Associates for Community and Population Research.

Kibria, Nazli. No date. Social and Cultural Impact of Sisimpur: Phase 2 Report. Washington: U.S. Agency for International Development.

Kibria, Nazli, and Sonali Jain. 2009. "Cultural Impacts of Sisimpur, Sesame Street, in Rural Bangladesh: Views of Family Members and Teachers." Journal of Comparative Family Studies 40, no. 1: 57-75.

Lee, June H. 2009. Sisimpur's Reach and Educational Impact: Evidence From a National Longitudinal Survey of a Sesame Street Project in Bangladesh. New York: Sesame Workshop.

In "G" Is for Growing: Thirty Years of Research on Children and 'Sesame Street," edited by Shalom Fisch and

Linebarger, D. L. and D. Walker. 2005. "Infants' and Toddlers' Television Viewing and Language Outcomes." American Behavioral Scientist 48: 624-45.

Mares, M.-L. and Z. Pan. 2013. "Effects of Sesame Street: A Meta-analysis of Children's Learning in 15 Countries." Journal of Applied Developmental Psychology 34, no. 3: 140-151.

Naudeau, S., S. Martinez, P. Premand, and D. Filmer. 2011. "Cognitive Development among Young Children in Low-Income Countries." In No Small Matter: The Impact of Poverty, Shocks, and Human Capital Investment in Early Childhood Development, edited by H. Alderman. Washington: World Bank.

Palmer, Edward L., and Shalom M. Fisch. 2001. "The Beginnings of Sesame Street Research." In "G" Is for Growing: Thirty Years of Research on Children and 'Sesame Street,'" edited by Shalom Fisch and Rosemarie Truglio. Mahwah, NJ: Erlbaum.

Sesame Workshop. 2013. "University of Wisconsin–Madison: Meta-Analysis Shows Learning Impact of Sesame Street Around the World." Press release. http://www.sesameworkshop.org/press-releases/university-of-wisconsinmadison-meta-analysis-shows-learning-impact-of-sesame-street-around-the-world/.

-----. 2016. Cleaner, Healthier, Happier: A Water, Sanitation, and Hygiene (WASH) Initiative in Bangladesh, India, and Nigeria. New York: Sesame Workshop.

----. No date, a. "Africa Teacher Initiative: Tackling an Education Challenge, Starting with Teachers." http://www. sesameworkshop.org/what-we-do/our-initiatives/ghana/.

Sesame Workshop. No date, b. "Literacy & Numeracy." http://www.sesameworkshop.org/what-we-do/our-results/ literacy-numeracy/.

----. No date, c. "Making Early Education Center Stage in India's Poorest Neighborhoods." http://www. sesameworkshop.org/what-we-do/our-initiatives/india/.

----. No date, d. "Our Initiatives." http://www.sesameworkshop.org/what-we-do/our-initiatives/

UNESCO. 2006. Strong Foundations: Early Childhood Care and Education–EFA Global Monitoring Report 2007. Paris: UNESCO.

----. 2015. Education for All 2000-2015: Achievements and Challenges. EFA Global Monitoring Report 2015. Paris: UNESCO.

UNICEF. 2014. Early Childhood Development: A Statistical Snapshot. New York: UNICEF.

Walker, S. P., et al. 2011. "Inequality in Early Childhood: Risk and Protective Factors for Early Child Development." The Lancet 378: 1325-38.

Wright, John C., et al. 2001. "The Relations of Early Television Viewing to School Readiness and Vocabulary of Children from Low-Income Families: The Early Window Project." Child Development 72, no. 5: 1347-66.

## **Endnotes**

- 1. For a review of such studies, also see Wright et al. 2001.
- audience.

2. Formative research-typically conducted by Sesame Workshop's in-house team of educational researchers-is conducted both before and during production to test the appeal of the program and comprehension of material, as well as to guide the development of new material. Summative researchtypically conducted by external evaluators, academics, or market researchers, but sometimes through in-house studies or a mixture of commissioned and internal studies-is conducted, when possible, after production to assess whether the material has met its goals and to measure its impact on the targeted



1775 Massachusetts Ave., NW Washington, D.C. 20036 202 797 6000

www.brookings.edu/universal-education

© 2016 The Brookings Institution