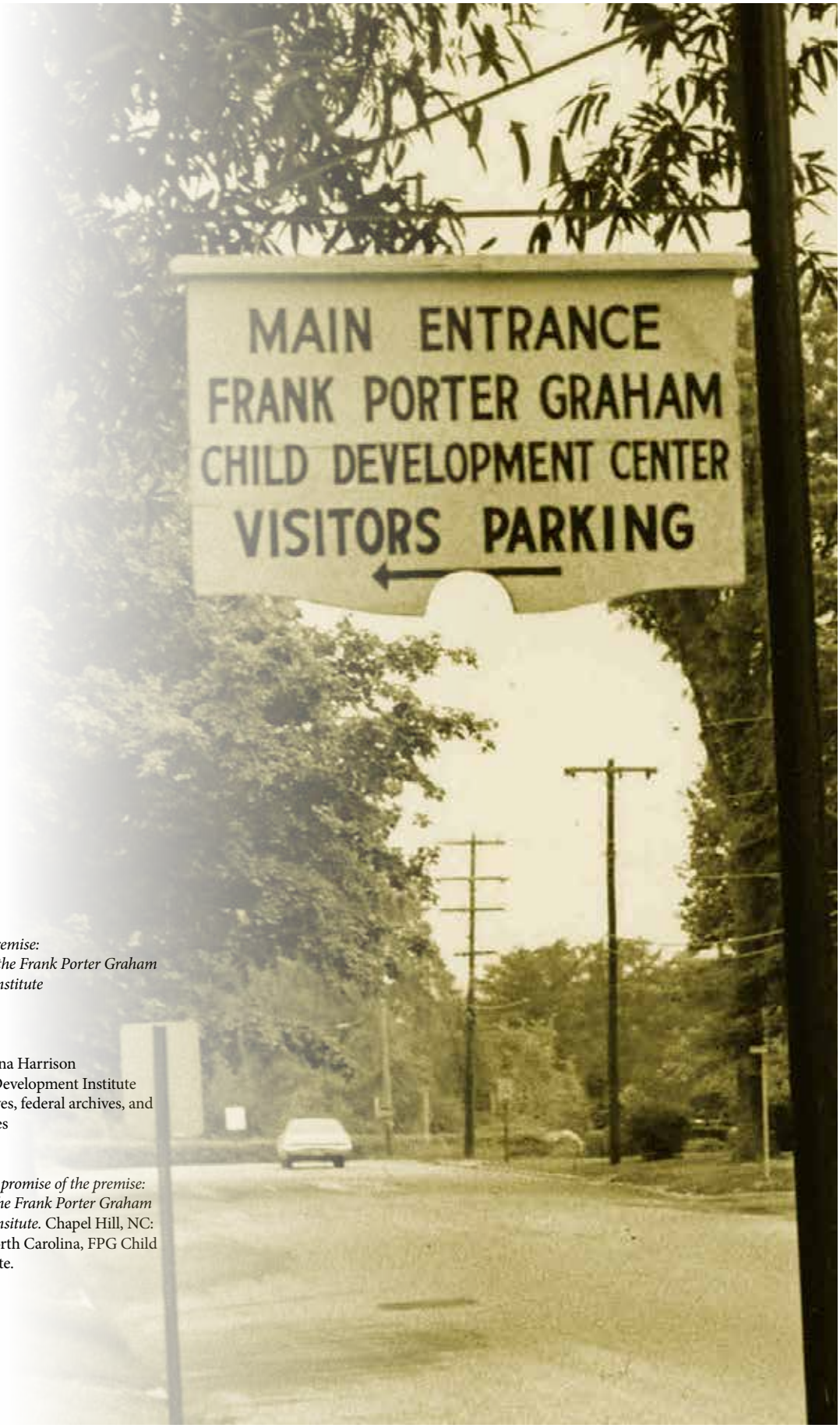
The Promise of the Premise

The First 50 Years of the Frank Porter Graham Child Development Institute



The Promise of the Premise:
The First 50 Years of the Frank Porter Graham Child Development Institute

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The Promise of the Premise

The First 50 Years of the Frank Porter Graham Child Development Institute

"Childhood has always been a source of wonder and astonishment to people. It is a land through which we have all traveled, but to which we can never return. Our memories of that journey are fragmentary and, at least, partially incorrect. Still, one can stand in awe of the process by which an infant develops over time into a mature adult. At FPG, we try to do more than just admire this complex process. We seek to understand how childhood unfolds and how we can help children develop the best in themselves."

—James J. Gallagher, director 1970–1987

What if it were possible to change the trajectories of children's lives by providing quality care and education starting in their earliest years? What if such a learning environment not only significantly affected the development of children who experienced it but in turn could begin to alleviate wider social problems? What if a group of dedicated scientists and specialists created and led an institute with a commitment that demanded applying what research revealed to real-world solutions?

This is the story of the Frank Porter Graham Child Development Institute (FPG) and its evolution over the last half-century as its scientists and specialists have worked to fulfill the promise of the premise. What FPG has discovered about children and families and accomplished on their behalf has surpassed anything its founders could have imagined.

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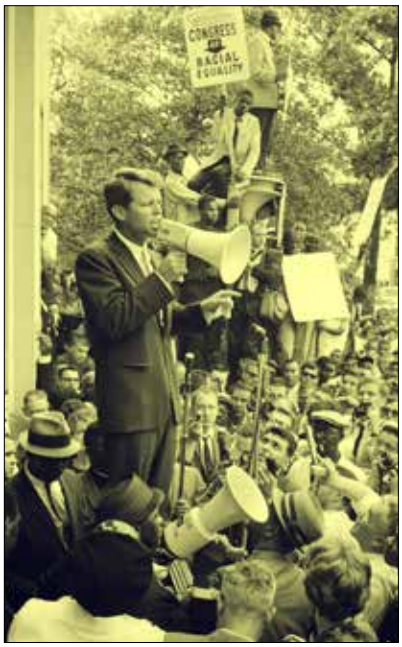
JFK, LBJ, and FPG

a new center and its foundational years



Robert Kennedy on the steps of the Justice Department

The Soil

The idea for the Frank Porter Graham Child Development Institute grew out of the turbulent soil of the 1960s—out of iconic frame-by-frame images of a president's killing in slow-motion, yet also images of his brother, too, on Justice Department steps with a bullhorn in hand, calling for racial justice.

The decade demanded social progress. African Americans marched on Washington after integrated groups of demonstrators participated in Freedom Rides across the South. Congress legitimized the ideal of equality with the Equal Pay Act, the Civil Rights Act, voting rights legislation, and immigration reforms. President Lyndon B. Johnson declared war on poverty, and, on behalf of children in poverty, Head Start was born. Illinois set a progressive precedent for homosexual rights at the state level by abolishing laws proscribing gay sex. Betty Friedan and colleagues founded The National Organization for Women to work for the end of gender discrimination. Disability rights advocates began challenging the status quo of care in institutions and asylums, including Burton Blatt and Fred Kaplan's release of *Christmas in Purgatory, A Photographic Essay on Mental Retardation*, which exposed the horrific treatment of people with mental illness and intellectual disabilities.

Awareness and change, however, often were coupled to violence in the 1960s. By the time of FPG's founding in 1966, President John F. Kennedy and Malcolm X already had been assassinated, the U.S. had committed 200,000 troops to Viet Nam, and much of the decade's most chilling violence had yet to come. Assassins also would gun down Robert Kennedy and Martin Luther King. The New York City Police Department would set off an infamous four-day riot by raiding a gay bar called the Stonewall Inn. U.S. officials would tout victories in Viet Nam by comparing body counts, sending escalating numbers of troop overseas, and instituting the draft—and draft cards would burn. The 1960s was a decade of great tragedy that nonetheless provided a context that nourished lasting, organized commitments on behalf of peace, the poor, women, gays and lesbians, people of color, people with disabilities, and children.

John F. Kennedy had planted the seeds for the Frank Porter Graham Child Development Institute in key federal legislation he had signed into law the month before he was assassinated.

John F. Kennedy, in fact, had planted the seeds for the Frank Porter Graham Child Development Institute in key federal legislation he had signed into law the month before he was assassinated.

The New Frontier and the Great Society

Kennedy's sister Rosemary had intellectual disabilities, which in large part—along with his sister Eunice's encouragement—compelled him early in 1963 to challenge Congress to significantly address mental illness and mental health by establishing interdisciplinary research centers that could profit from "the talents of our best minds." Not only did the subsequent *Mental Retardation Facilities and Community Mental Health Centers Construction Act* authorize funding for developmental research centers in university-affiliated facilities, the law also specifically included provisions that supported universities in the *construction* of research centers. With Kennedy's assassination the following month, the Act marked the end of his planning for America's "New Frontier"—but the legislation's crucial, germinating effects would long outlive its biggest advocate.

John F. Kennedy's address to the nation on civil rights, 1963.

After Lyndon Johnson succeeded Kennedy, new programs and policies originating from the White House fueled Johnson's move to a "Great Society," through which he fostered efforts to reduce inequalities in wealth, health, and education. Johnson signed Medicare and Medicaid into law, and when his "War on Poverty" zeroed in on the plight of children, the 1965 launch of Head Start began more than 50 years of federal funding for early education for children from low-income families.

In this climate, researchers also had begun to consider how early education could affect the trajectories of young children in poverty. In fact, it was the seminal question for husband and wife Hal and Nancy Robinson, psychologists at the University of North Carolina at Chapel Hill.

"It was wonderful to be living in a liberal community in the middle of the South, because it was a time of the civil rights movement," Nancy Robinson remarked years later. "There was a hopefulness about what could happen economically to our society and with inclusion of everybody, and that was very exciting and made a big difference in what we did there. The other movement at the same time was, of course, in 'mental retardation.'" And, thanks to Kennedy's pivotal legislation and the federal political context, "There was money."

Nancy and Hal Robinson

Nancy and Hal Robinson and close colleagues at UNC proposed building a center on "retardation" that would include both behavioral and biological components. Early planners included members of the Chapel Hill School Board, School Superintendent Howard Thompson, and UNC's Thelma Thurstone, Harriet Rheingold, and Ann Peters. The Robinsons would become FPG's co-founders—and Hal its first director—when the National Institutes of Health

The Robinsons and their small group of scientists wanted to determine if and how high-quality child care impacted intellectual deficits in young children from at-risk families.

awarded 12 grants to establish research centers across the nation to study and treat "mental retardation."

FPG ("Frank Porter Graham Child Development Center" in its early years) was the sole center focusing on prevention—especially the prevention of problems resulting from childhood poverty. Nancy Robinson explained the connection between inadequate environmental conditions and intellectual deficits in children, a link few people were making. "The war on poverty and the war on 'mental retardation' were going on side by side," she said, "but nobody was saying they were the same one."

The husband-and-wife team had planned to establish a model child care center that offered comprehensive services to a small number of infants and toddlers, a place where scientists also could study their learning and development. The Robinsons and their small group of scientists wanted to determine to what extent high-quality child care could impact intellectual deficits in young children from at-risk families. They also wanted to explore the effects of group care for infants, as well as how children from different backgrounds could share the same settings.

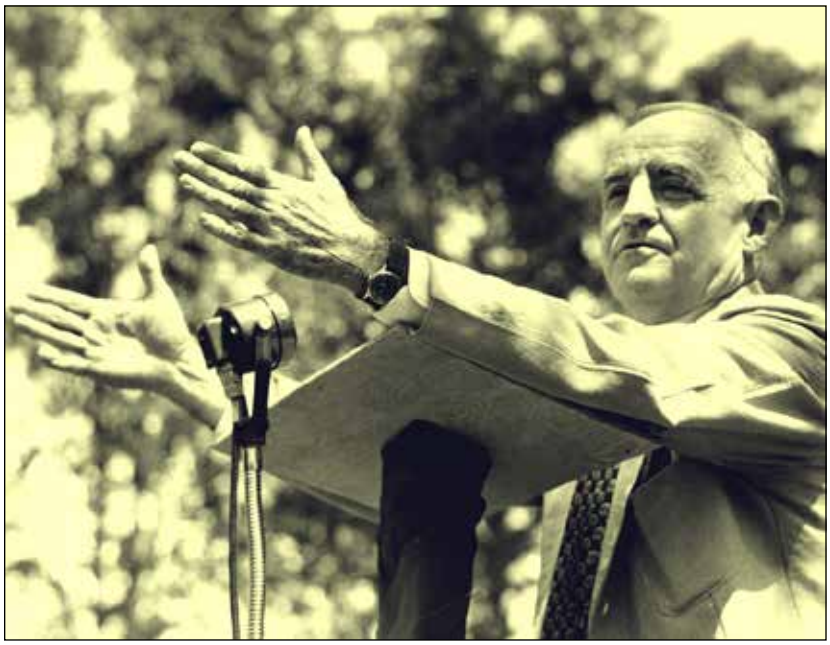
"In the 1960s, there was talk about the 'cycle of poverty' and how generation after generation had problems in school and life," said Joseph Sparling, who came to FPG in 1967. He subsequently co-created the curriculum for the most famous study in early childhood education and care, FPG's Abecedarian Project.

"There was a sense of concern, because of the Civil Rights Movement, that there needed to be more equity in society and that universities needed to respond," Sparling said. "Educators and psychologists saw a social role for themselves. Until then, they primarily viewed their role as creating knowledge. There was a sweeping vision that we were not only going to do research in the field of 'mental retardation' but also to produce a program that had practical value to society."

The Man Behind the Name

And why had the Robinsons chosen Frank Porter Graham as the namesake that would embody such extraordinary goals? Some consider Graham to be the most renowned southern progressive of his time for promoting public education and for advocating on behalf of the less fortunate. From 1930 to 1949, he served as president of the University of North Carolina at Chapel Hill. At Franklin Delano Roosevelt's request, he chaired the president's National Advisory Council on Social Security. Later in his career at UNC, Harry S. Truman named him to the President's Committee on Civil Rights, and North

Carolina's governor appointed Graham to replace a U.S. Senator from the state who had died after taking office. Afterward, Graham flourished throughout a tenure spanning two decades as a diplomatic mediator and representative for the United Nations. More than 20 colleges and universities recognized him with honorary degrees, which comprise only a portion of his awards. In Chapel Hill, his portrait adorns the Morehead Planetarium, the UNC General Administration Building, and the university's Frank Porter Graham Student Union.



Frank Porter Graham

Stories about his character and belief in equity pervade campus lore, such as when Graham had grappled with the dean of UNC's Medical School over admission of a Jewish student in 1933. During the dean's tenure, he had instituted a cap for Jewish students, allowing in only four out of the incoming class's 40 students. Despite the dean's alarmist arguments about the imminent collapse of the medical school if the cap did not remain in place, Graham ordered him to admit a qualified student who would make the fifth Jewish student in the incoming class. The dean resigned, but of course the Medical School flourished.

Hal Robinson met Graham years later—and never forgot him.

"Hal was on a plane ride from somewhere when his seatmate was Frank Porter Graham, who at that time was a U.N. mediator," Nancy Robinson explained. "Hal came home and said, 'I have met the most wonderful man, the most wonderful humanitarian I ever hope to meet.' And so … it became the Frank Porter Graham Center."

Newspaper reports said early plans for FPG included making temporary use of a local Presbyterian church's facilities for the first group of children. Shortly afterward, three trailers on Cameron Avenue in Chapel Hill provided classroom space for 11 children and five staff, with the Robinsons' own daughter, Beth, the first enrollee at FPG. According to Nancy Robinson, the center typically brought in children at a very early age, from the time their mothers had returned to work after giving birth.

FPG offered nothing short of a radical child care setting for the South of the 1960s. "It involved black and white children together. This was revolutionary in those days and times."

FPG also offered nothing short of a radical child care setting for the South of the 1960s. "It involved black and white children together," she said. "This was revolutionary in those days and times."

Named, funded, and with key political support from UNC System president William Friday and other university heavyweights, the

School segregation protest

fledgling center began what would become a half-century of research, technical assistance, professional development, and other forms of public service. FPG's influence would spread across many professional and disciplinary spheres, and by the time the original little center would celebrate its golden anniversary as a booming institute, people in 180 countries would use its resources, and children from its very first major project would still be making news.

As difficult, exciting, and complicated as it would prove to be, FPG had embarked on its mission to fulfill the promise of the premise that it was possible to affect the trajectories of lives by steering them onto better courses early—and that doing so, in turn, could begin to alleviate broader social and economic challenges. An innovative project with an odd-sounding name soon would begin at FPG—and it would never end. It would become the most famous longitudinal study of early care and education, firmly establishing the foundation for FPG's reputation for rigorous and pioneering research. In fact, over four decades later, a Nobel laureate would peruse its latest data and tout the study's newest groundbreaking findings.

Craig Ramey (foreground)

The Abecedarian Project

Craig T. Ramey expanded FPG's child care research into the Abecedarian Project, which drew its name from the adjective meaning "rudimentary" or "fundamental"—as simple as the ABCs—and from the noun meaning "a person who is just learning." Over the years, "Abecedarian" would become synonymous with positive, long-term effects of high-quality early care and education, particularly with regard to the power of early intervention to surmount some of the disadvantages of poverty.

The Abecedarian Project represented a revolutionary approach in early childhood education. It differed from other childhood intervention projects because it began in early infancy and exposed children in poverty to a high-quality child care setting for five years—the entire period from birth through school entry—instead of the shorter durations typical of other projects.

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The original study was a randomized trial to examine the extent to which intensive early childhood education could overcome the odds of developmental delays and academic failure for children born into low-income families. Using an experimental design, researchers recruited 111 at-risk children from families in Orange County, North Carolina. Although ethnicity was not a selection criteria, most children were African American and born between 1972 and 1977.

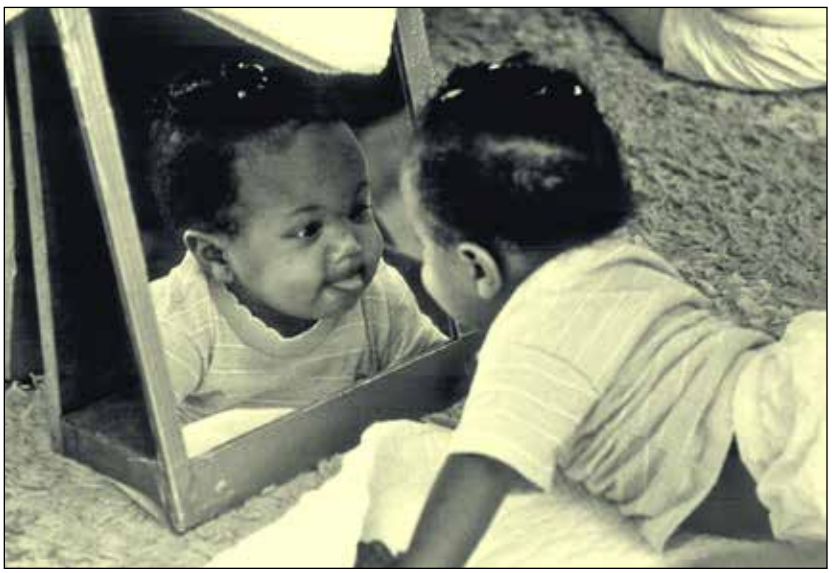
In addition to receiving their health care on-site from staff pediatricians, children benefited from stable and predictable early childhood experiences, attending a high-quality child care center for five years, five days a week, year round. They received an innovative program of educational experiences, the "Abecedarian Approach," comprised of four key elements: language priority, conversational reading, enriched caregiving, and a game-based curriculum. Researchers designed the early childhood educational activities to support age-appropriate development across the infant, toddler, and preschool years.

In creating the program, researchers shaped their activities as playful back-and-forth exchanges between adult and child. "I had picked up on the game idea and decided it was a good way to make an educational program," said Joseph Sparling. Sparling originally helped plan and administer the Abecedarian program, and with the curriculum's co-creator Isabelle Lewis, he considered the milestones of child development, the findings of developmental research, and especially the developmental concepts of psychologist Lev Vygotsky.

"We also tried to make the games fun," said Sparling, "so that the adults would keep using them."

Sometimes the games integrated traditional activities, such as peekaboo. Each child had an individualized prescription of games, and as children aged their activities became more conceptual and skill-based. Although the games focused on social, emotional, cognitive, and physical areas of development, they gave particular emphasis to language.

"We told the teachers that every game is a language game," said Sparling. "Even if the activity focused mostly on motor skills,



Over the years, "Abecedarian" would become synonymous with positive, long-term effects of high-quality early care and education, particularly with regard to the power of early intervention to surmount some of the disadvantages of poverty.

the teachers still needed to talk to the children and to elicit age-appropriate language from them."

But could this approach actually work?

Researchers took the games into the nursery or classroom for formative evaluation, testing the curriculum and producing 200 successful games. In 1978, they published the curriculum as the *LearningGames*® book series—the first scientifically validated infant and toddler curriculum—and within five years, over 100,000 copies had sold. Today, the Creative Curriculum *LearningGames*® series still comprises 200 games in five volumes and finds wide use in preschools, group day cares, family day care homes, parent groups, and home visitation programs.

Isabelle Lewis and Joe Sparling

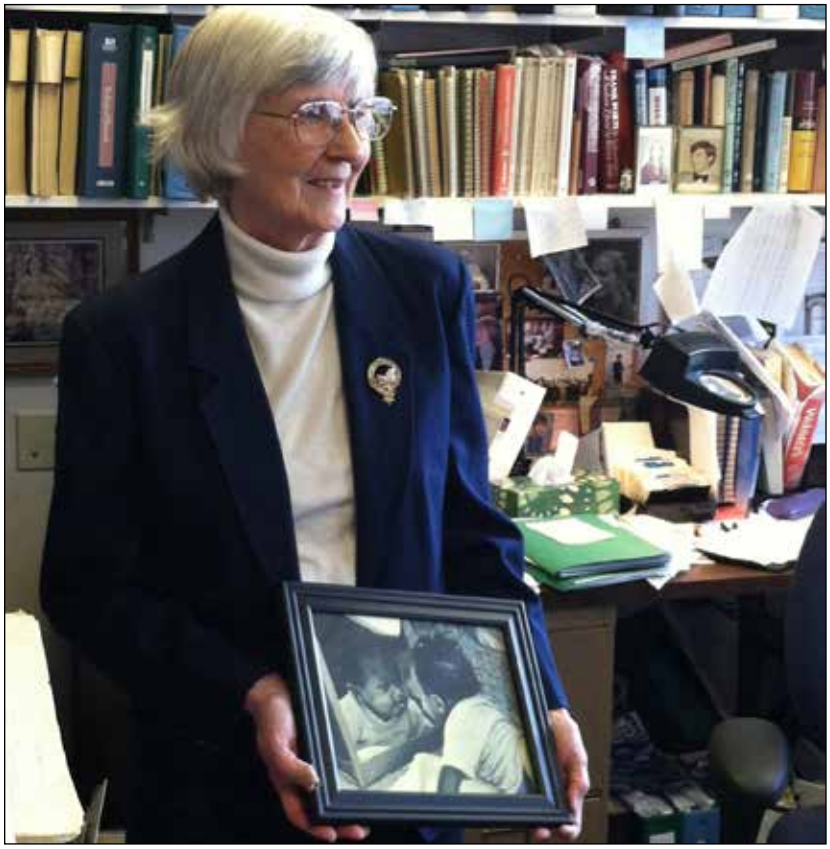
Researchers also followed the participating children well into adulthood, assessing them at age 5, 8, 12, 15, 21, 30, and 35—and currently are doing so at age 40. Through age 15, I.Q. scores for the children who received the birth-to-age-5 Abecedarian intervention were higher than those of the randomly assigned control group. The children receiving the Abecedarian Approach on average also scored higher on achievement tests in math and reading during their elementary and secondary school years. In addition, they had lower levels of grade retention and fewer placements in special education classes.

Frances Campbell, who was with the project from the start, took over from Ramey as principal investigator midway through the age 15 follow-up study and since then has served as principal investigator. At age 21, the group who had received the Abecedarian intervention had maintained statistically significant advantages both in intellectual test performance and in scores on academic tests of reading and mathematics, and they also had attained more years of education. In addition, recipients of the Abecedarian curriculum were more likely to attend a 4-year college or university, more likely to be in school or to have a skilled job, or both. They also were less likely to be teen parents, less likely to smoke marijuana, and less likely to report depressive symptoms, when compared to the control group. At age 30, the treated group was more likely to hold a bachelor's degree, have a job,

and delay parenthood, among other positive differences from their peers. At age 35, they also were more likely to be in better health.

The Abecedarian Project also brought unmistakable advantages for the teenage mothers with children in the treatment group receiving full-time educational child care. By the time their children were 4½ years old, these mothers were more likely to have finished high school and undergone post-secondary training, more likely to be self-supporting, and less likely to have more children. Additional training, employment experience, and education led to increased earnings and decreased reliance on social assistance, all of which were important factors when independent economists calculated cost-benefit ratios for the project.

The economic benefit was clear. For every dollar spent on the program, taxpayers saved much more as a result of participants' higher incomes, less need for educational and government services, and reduced health care costs. In short, the project has demonstrated that high-quality, enriched early education environments can help children and parents surmount some of the disadvantages of poverty. Not only can the effects be far-reaching as children progress through adulthood, but the long-term savings to society also are considerable.



Frances Campbell

And profound recent findings suggest that the benefits to people who receive high-quality education and care *and* to society at large may be even more comprehensive than research previously has shown. With substantial implications for health care and prevention policy around the globe, the project's 2014 study in *Science* reported that children who received Abecedarian early care and education from birth until age 5 enjoyed better physical health *in their mid-30s* than peers who did not attend the child care program.

The findings are the result of FPG's collaboration with researchers from University College London and the University of Chicago, where Nobel Prize winner James J. Heckman spearheaded an intricate statistical analysis of data from the project. Not only did FPG scientists and Heckman's team determine that people who had received high-quality early care and education in the 1970s are healthier now, but significant measures also indicate better health lies ahead for them.

"To our knowledge, this is the first time that actual biomarkers, as opposed to self reports of illnesses, have been compared for adult individuals who took part in a randomized study of early childhood

education," said Campbell. "We analyzed actual blood samples, and a physician conducted examinations on all the participants, without knowing which people were in the control group."

"This study breaks new ground in demonstrating the emergence of the relationship between education and health," said Ramey, who now serves as a professor of pediatrics and a distinguished research scholar at the Virginia Tech Carilion Research Institute. "It broadens our understanding of the power of high-quality early experience to change lives for the better."

The new study determined that people who received early care with the Abecedarian program have lower rates of *prehypertension* in their mid-30s than those in the control group. They also have a significantly lower risk of experiencing coronary heart disease (CHD)—defined as both stable and unstable angina, myocardial infarction, or CHD death—within the next 10 years.

Compared to the control group, males treated in the Abecedarian program had lower incidences of *hypertension* in their mid-30s. In addition, treated men less frequently exhibited combinations of both obesity and hypertension, and none exhibited the cluster of conditions known as "metabolic syndrome," which is associated with a greater risk of heart disease, stroke, and diabetes.

"It is of particular significance that an early educational intervention produced long-term health effects," said Sparling.

Campbell said many factors might have contributed to the sustained and substantial health benefits now seen for study participants in their mid-30s: more intensive pediatric monitoring, improved

"Investing in early childhood programs has been shown to pay off in ways we did not anticipate 40 years ago when the Abecedarian study was founded."

nutrition, a predictable and less stressful early child care experience, and improved adult education. Even without pinpointing a single mechanism responsible for improved adult health, scientists involved in the Abecedarian effort agree that early childhood interventions are an encouraging avenue of health policy to explore.

"Good health is the bedrock upon which other lifetime accomplishments rest, and without it, other gains are compromised," said Campbell. "Investing in early childhood programs has been shown to pay off in ways we did not anticipate 40 years ago when the Abecedarian study was founded."

Over the years, the Abecedarian Project continually has reaffirmed the premise in more ways than anyone had suspected possible; indeed, a full-time, nurturing, multifaceted early learning environment for birth-to-5 year olds did change life trajectories substantially for the better. If the premise was sound, it continually confirmed obligations to explore how, why, and under what conditions it was most effective to alter life trajectories positively. How best could the field continue to support teachers, programs, and policies, and create

the infrastructure that would sustain widespread high-quality early care and education? How could we foster the best early conditions for all children, from the gifted to the disabled, across all backgrounds and ethnicities?

During its early years, FPG needed a force to establish its *own* trajectory in order to enable the best opportunities for its experts to work toward fulfilling the promise of the premise. But what kind of force could move a small child care center that opened in a collection of trailers toward eventual global leadership in child development and education?

A force called "Jim."

James J. Gallagher

There would be no ivory tower here. That much was clear from the start when icon James J. Gallagher, who would be known for the next four and a half decades at FPG simply as "Jim," became director in 1970. FPG would not conduct research in a vacuum, nor produce knowledge only for the sake of producing knowledge. Gallagher's longtime charge for FPG was to marry its research with reality.

"We wanted to see that the knowledge that was gained was put into practice as quickly as possible," he said later. For Gallagher, that meant that while FPG was becoming a world-class research institute it also should invest resources and personal capital in technical assistance, curriculum development, and other initiatives that made for "a well-rounded institute." Research—*with* its application—equaled impact, and FPG would impact children and families by being a power in the field, on the ground, in classrooms, with programs, and for policymakers.

These two veins, research and its application, would run through FPG's trunk, into its branches, and even into new shoots and leaves at its golden anniversary.

After the Robinsons had left for the University of Washington (where, incidentally, FPG's co-founders later would make significant impressions on future FPG directors Don Bailey and Sam Odom), Gallagher took over from interim director Earl Siegel. Gallagher arrived at FPG teeming with political savvy, contacts, and experience. He had been the first Chief of the Bureau of Education for the Handicapped in the then U.S. Office of Education, and during his federal career, he had overseen a wide range of new legislation representing the first major efforts of a new national agenda on free and appropriate education for children and youth with disabilities. He also approved the development of closed-captioning technology—and the first funding for *Sesame Street*.

Before joining FPG, he had made a timeless address to the National Association for Gifted Children. "This generation cannot afford to be a spendthrift in intellectual resources as it has been in its physical gifts," he said in 1965. "The price of failure is too high."

Gallagher knew how to secure funding, having already conducted studies of children with brain injuries and gifted children, and he played an integral role in establishing connections between

"When I came to Frank Porter Graham from Washington, one of the things I wanted to do was take research from its isolated position and fold it together with other aspects of programs that would put the research to use."

—James J. Gallagher

Jim Gallagher (left) and Governor Hunt

FPG's research, expertise, and policy. His many contributions would include the integral role he played on Governor James B. Hunt, Jr.'s planning team to develop the North Carolina School for Science and Mathematics; it would be the first residential school of its kind focusing on talented students in those subject areas at the secondary level. Gallagher also would be instrumental in updating state law and regulations to better serve gifted students in North Carolina, and Hunt would recruit him to lead the state's fledgling high school competency testing commission, which established the threshold for student knowledge required at graduation.

Because Gallagher's areas of interest included gifted education, it would become a rich avenue of inquiry for FPG's work over the next several decades, and in 1981, the World Council on Gifted and Talented Children would elect him its president. He also would write over 200 articles for a wide range of professional journals, as well as 39 books. These included one of the most widely used textbooks in gifted education, co-authored with his daughter, Shelagh Gallagher, and *Educating Exceptional Children*, which he and colleague Mary Ruth Coleman later would revise through its 14TH edition.

Jim Gallagher would serve as FPG's director for 17 years and remain invaluable both to FPG and the field long afterward, mentoring the directors who followed him at FPG, including current director Sam Odom. "His leadership was foundational in FPG's development," Odom said. "FPG became one of the nation's leading research institutions."

These two veins, *research* and its *application,* would run through FPG's trunk, into its branches, and even into new shoots and leaves at its golden anniversary.

Donald J. Stedman, who later became dean of UNC's School of Education, was associate director during Gallagher's early years at FPG. "He cared about children," said Stedman. "He was relentless in his pursuit of real issues in research and teaching."

While the Abecedarian Project was in its planning and recruitment stages, Stedman and Gallagher wanted to tell the center's namesake about their other plans—in person. Frank Porter Graham was in failing health, and it was only months before the end of his long decline when Gallagher and Stedman visited him at his Chapel Hill

home. They met with the luminary in his living room, where he was sprawled uncomfortably on a couch but interested in Gallagher's slide presentation of the vision for FPG. Gallagher spoke vibrantly and enthusiastically for several minutes, laying out a roadmap for the center that bore Graham's name while the former diplomat listened quietly.

When Gallagher had concluded, Graham's reply was concise: "Do you have a plan for ongoing state funding?"

Keystone Technical Assistance

Despite Graham's pointed reply, FPG was about to undertake a new group of projects that relied on *federal* funding.

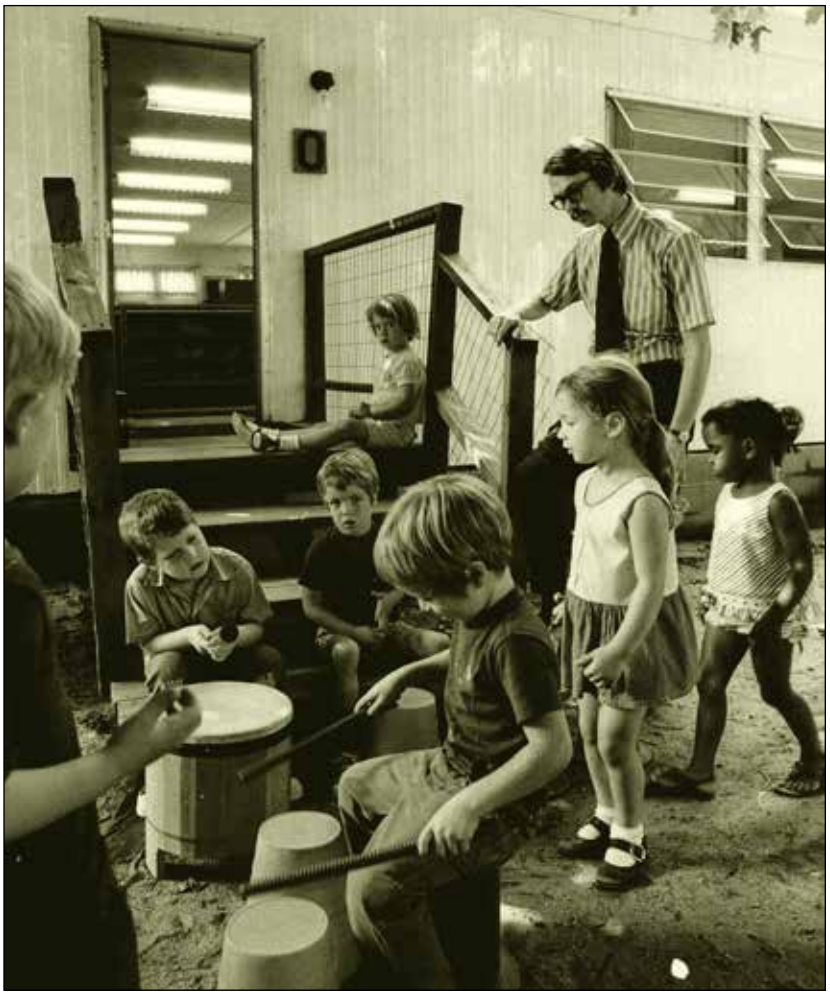
"FPG invented technical assistance systems and the process of bridging the gap between research and practice," said Don Stedman later. He had been an outspoken proponent of strong programs for children with intellectual disabilities, and the same year Graham had listened in his living room to the plans for FPG, Jim Gallagher, Stedman, and others worked to launch the first project that would become part of a long tradition of pioneering support for people and programs serving children with disabilities.

The Technical Assistance Development System (TADS) opened with a grant from the U.S. Department of Education. The following year, under Ronald Wiegerink's direction, the Developmental Disabilities-Technical Assistance System (DD-TAS) was up and running, drawing its support from the U.S. Social and Rehabilitation Services Administration. Two years later, Pat Trohanis—who would remain a TA stalwart at FPG over the next three and a half decades—was directing the Mid-East Learning Resource System, a joint project with the University of Kentucky and George Washington University to help seven states and the District of Columbia upgrade their special education programs.

FPG's TA experts were offering a collaborative, coordinated approach to fostering change, building capacities of people and organizations, always with improved outcomes for children and families in mind—and in the mid-1970s, new legislation would change the landscape of their work. Congress passed the *Education for All Handicapped Children Act* in 1975 (later reauthorized as the *Individuals with Disabilities Education Act*, or IDEA), requiring equal access to education for children with physical or mental disabilities, and suddenly FPG's TA expertise also was in demand to help schools comply with the new legislation.

In 1976, David Lillie was directing TADS, and his staff were serving dozens of projects and 27 state education agencies. Meanwhile, the DD-TAS was offering their expertise and help to governors' councils

FPG's technical assistance would continue to expand and evolve, becoming a keystone in the national infrastructure that supports early childhood special education.



Joe Sparling and children at a trailer, before FPG moved into permanent offices

in all 50 states and officials in 6 U.S. territories. By the end of the decade, Trohanis had become director of TADS, the DD-TAS had completed its national mission, and Dick Clifford, who would remain instrumental at FPG on multiple fronts over the next 36 years (and counting), was directing North Carolina's Day Care Technical Assistance and Training System; the state's Department of Human Resources had funded the project to train county-level day care coordinators and state-level staff involved in NC's early intervention project, as well as others.

During the next few decades, in large part under the direction of Trohanis—and with the added expertise of Betsy Ayankoya, Tal Black, Joan Danaher, Shelley deFosset, Joicey Hurth, Lynne Kahn, and many others—FPG's technical assistance would continue to expand and evolve, becoming a keystone in the national infrastructure that supports early childhood special education. But FPG's pioneering TA projects already had become so popular they had outgrown their confines, and the group had to find offices in a bank building on Franklin Street in downtown Chapel Hill.

While FPG's technical assistance expanded through the 1970s, Parents Magazine Films produced *Even Love Is Not Enough: Children with Handicaps*, which featured Jim Gallagher, Don Stedman, Ron Wiegerink, Joseph Sanders, and Ann Turnbull. By then, FPG's child care program had left its Cameron Avenue trailers for a new research building—a utilitarian structure that Gallagher would later joke was a "tribute to the lowest bidder." Regardless of the aesthetics, though, the lowest bidder had constructed a home for FPG that would still house the institute over 40 years later—and the work already underway there during Gallagher's early years would be integral in guiding FPG's own trajectory.

Seeds

"Knowledge is not born full-grown, ready to take its place in the world," Gallagher wrote. "Many discoveries are obscure; their worth is not evident until they pass through the long process of development and application." The 1970s was a period of discovery and budding growth for FPG, a decade that incubated many interests that later became fully fledged missions as FPG's original charge expanded.

Al Collier, for instance, planted the first seeds for FPG's research on the physical health of young children. For what would become a long-running study, Collier began taking throat cultures from children in the child care program. Collier, who two decades later would serve as interim director of FPG, and fellow pediatrician Fred Henderson checked in regularly with the children and met several times each week with nurse practitioner Jessie Watkins and resident assistant Sally Scaringelli in FPG's medical office. Their work involved a problem so widespread it had demanded study; 75% of American children from birth to age 3 were experiencing middle ear infections, and Collier's intent was to research cold and flu viruses, vaccines, and bacterial complications in the ear, nose, and throat.

Some of his team's findings would bring reason for optimism. They concluded, for instance, that there was no relationship between tested intelligence at age 5 and otitis media with effusion—a post-infection pocket of fluid in the middle ear that lends itself to renewed infections. Thanks to an infusion of federal funding from the National Institute of Child Health and Human Development, Collier also was able to determine that when children with respiratory illnesses attended the center, the infectious period had passed—and, as a result, the center's overall number of illnesses did not increase. He also would publish a seminal article in *The New England Journal of Medicine* that identified the culpable cold virus that spiked the risk for children to develop otitis media.

Collier's trailblazing work—and subsequent studies from FPG researchers—would give rise to the current landscape, a comprehensive look at young children that encompasses physical, emotional, and social health, with studies and approaches that involve variables from genetics to new modes of classroom instruction and much more. Similarly, other early interests in the 1970s provided foundations for later work. Emerging understanding about the ecology of childhood emphasized the importance of family, and early research from a study by Craig Ramey and Dale Farran determined that day care did not interfere with the mother-child relationship. Earl Schaefer found that parent-child interactions at home impacted school achievement, and by the end of the decade, Gallagher would launch a new, massive project devoted to understanding families with children with disabilities.

The 1970s was a period of discovery and budding growth for FPG, a decade that incubated many interests that later became fully fledged missions as FPG's original charge expanded.

In the early years, FPG's scientists also led research on child experiences and specific interventions in early learning environments. Lynne Vernon-Feagans collaborated on a longitudinal study with Don McKinney of how children with learning disabilities developed in public school settings, and she worked with Dale Farran on a study of early language development. Loretta Golden studied dramatic play in the child care center; children held jobs that mirrored the

The commitment to train the next generation of researchers would become embedded in FPG's mission formally and informally through grants, collaborations, and mentorships.

jobs of adult workers, and they developed greater gains in factual knowledge and productive thinking than their peers without such exposure. Schaefer studied whether child care experiences could increase task-oriented behavior, and Gallagher looked at visual processing in infants. Ramey, who was helping two North Carolina agencies train day care workers, also studied whether reinforcement increased young children's vocalizations.

From its earliest days, FPG's interest in health, families, classroom experiences, and other factors influencing the development of children, with and without disabilities, have been key research interests—and in concert with these interests is a long tradition of training the next generation of researchers. In 1975, when FPG secured new funding from the National Institute of Child Health and Human Development, it included money for a research training program that McKinney established for graduate students and post-doctoral fellows to conduct research in child development and intellectual disabilities. McKinney, president of the North Carolina Association of Research and Education, studied impulsive and reflective children, as well as whether classroom behaviors impacted their academic achievement, and his training program provided a proving ground for researchers who would become enduring figures at FPG, key players in their fields, or both—Barbara Goldman, Joanne Roberts, Betsy Short, David MacPhee, Lynne Baker-Ward, Jan Blacher, Sandy Zeskind, Keith Yeates, and others. It also provided FPG with essential human resources, the sheer people power necessary to tackle and finish projects.

In addition to seeding the growth of fruitful research and the careers of the young scientists who would conduct it, the charge to train the next generation of researchers would become embedded in FPG's mission formally and informally through grants, collaborations, and mentorships. Over 35 years later, for instance, Barbara Goldman, longtime FPG researcher and director of FPG's Behavioral Measurement Core—and one of those first beneficiaries of McKinney's training program—would be actively carrying on the tradition. Over the years, she would develop and expand her own expertise in cognitive assessment, alternative assessments, peer relationships, child health and development, developmental disabilities, and parent-child interactions, publishing numerous book chapters and journal articles and delivering many more presentations. She also would sit on thesis and dissertation committees or otherwise mentor dozens of graduate students—including future FPG researchers Tracey West and Virginia Buysse—as well as mentoring dozens more undergraduates. For years,

Goldman, who counts Abecedarian pioneers Craig Ramey and Joe Sparling among her own early mentors, has been helping students develop their talents while also advancing research projects for FPG and its partners at UNC.

"I try to find ways that students can help me in the lab while learning or practicing skills that will be useful to them in their future lives," Goldman said recently. "Even for students who choose not to go into the kinds of work that they do here as undergraduates, the skills they learn and practice—and being able to see the scientific way of thinking in action—are valuable in whatever they choose to do next."

For students who at first are only partially inclined to a career in research, hands-on experience often is the clincher. "They can see and feel what it's like to have an idea, and test it out themselves, and maybe discover something new," Goldman said. "That's the hook for us researchers."

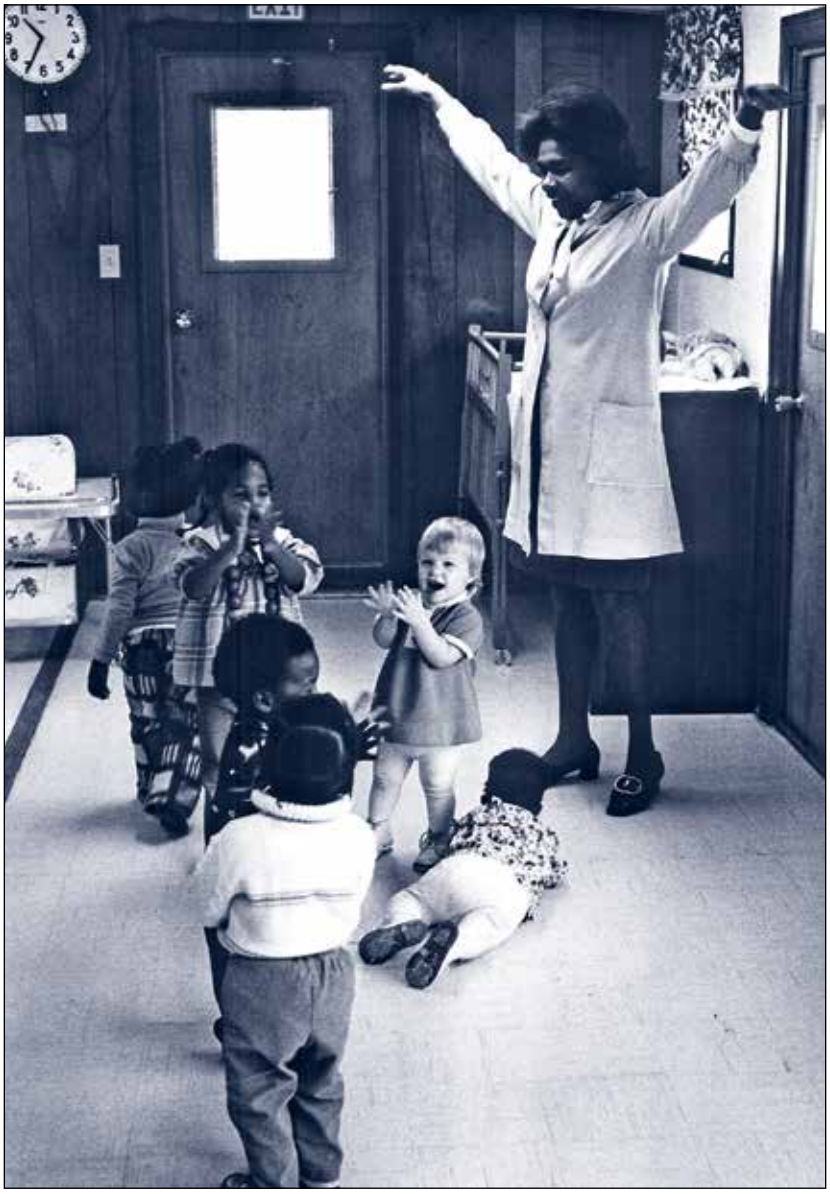
Research and mentorship seed research and mentorship, and as the close of the 1970s neared, that archetypal desire to *discover*, coupled with science's need to build on previous study, was fueling integral FPG projects to build the knowledge base on early education and child development.

Fred Henderson, stethoscope in hand

The Home Visitors

Of course, nothing seeded research like the Abecedarian Project. A quick search on *Google Scholar* today brings thousands of citations of the study, but in the late 1970s and early 1980s Barbara Wasik and Donna Bryant were among the first researchers to build upon Abecedarian's work. Their scholarship and service on FPG's behalf would prove invaluable for decades to come, continuing to advance the field to this day, and their careers each would include tenure as acting or interim director of FPG.

Wasik and Bryant's many projects include FPG's Carolina Approach to Responsive Education (Project CARE), which ran from 1977 to 1982, during which time they collaborated with Abecedarian pioneers Craig Ramey and Joseph Sparling on an experimental study of day care and home visiting. In the 1970s, home visitors received little preparation for their work with families, and FPG researchers became committed to addressing this gap. The lead home visitor in Project CARE was Carrie



Carrie Bynum, who had been a teacher in the Abecedarian Project (here), the lead home visitor for Project CARE

Bynum, a social worker by training, who had been a teacher in the Abecedarian Project.

"But most of the individuals who were providing home visiting in Project CARE had not received training for this role," Wasik said.

As a result, efforts shifted to helping the visitors develop necessary skills—one of the first efforts in the country to recognize the importance of training and supervision for home visitors.

Ramey, Sparling, Wasik, and Bryant later would spearhead FPG's Infant Health and Development Program, a national experimental study that looked at how medical or educational approaches resembling those used in the Abecedarian Project or Project CARE could help low birthweight babies. The new program would include a home visiting component and operated at eight sites in the 1980s. Bryant later would call it one of the "first big multisite studies of ways to reduce the 'achievement gap'"—the vast difference in skills of children from middle and low-income homes when they enter school—"decades before that term came into use."

And 20 years after Project CARE, Wasik and Bryant would still be teaming, authoring the book that years after its release remains a leading reference for the field: *Home Visiting: Procedures for Helping Families*.

Measuring Quality of Typical Care

As FPG transitioned from the 1970s to the 1980s, it had established commitments both to children with disabilities and to children in poverty, commitments that had sprouted from its early roots in JFK's "New Frontier" and LBJ's "Great Society." Groundbreaking research on prevention, training for the next generation of researchers, and technical assistance to help the people on the ground who were serving children embodied the Gallagher years and evoked the spirit of change two Presidents had envisioned long before.

One of Gallagher's main objectives for FPG in the 1970s was to provide the lead on curriculum development, and by the middle of the decade, experts working on curriculum development had recognized a dangerous gap: there was no systematic, objective, and reliable means for determining the quality of early childhood programs. Thelma Harms, FPG's director of curriculum development, had just published *Cook and Learn: A Child's Cook Book* that used 170 recipes for teachers to expand their children's vocabulary and understandings of math and nutrition. She and Dick Clifford, who headed North Carolina's Day Care Technical Assistance and Training System, developed an instrument that would help improve child care quality around the globe.

Thus, the *Early Childhood Environment Rating Scale* (famously to become known as the "ECERS") was born in part because of Gallagher's belief in structuring FPG so that its experts would interface with practitioners and administrators. "Child care was growing rapidly in the 1970s, and North Carolina was at the forefront," Clifford explained much later. "I directed a project that trained day care coordinators in county social services. Thelma Harms did a daylong session on what the coordinators should look for in child care. People asked her to put it in writing, so she and Lee Cross, the FPG child care program director, authored 'Environmental Provisions in Day Care.'"

"I was always interested in developing materials to be used in early childhood education," Harms said later. "At FPG, I was given free rein to see what was needed in the field. Jim Gallagher encouraged me to visit other programs in the U.S. practicing different approaches to curriculum development."

Harms and Lee had provided a checklist that teachers could use to gauge whether they were meeting the needs of their children. "I felt that a good early childhood environment had to meet the basic needs of children for protection of health and safety, support for social-emotional development and cognitive-language stimulation through appropriate activities," said Harms, who had spent years as head teacher at the laboratory preschool at the University of California at Berkeley.

For Clifford, the checklist seemed to be the key, the missing puzzle piece in the field's professional landscape. It essentially outlined the characteristics that were critical for a quality learning environment, and he thought they could adapt it for child care coordinators to use to monitor programs reliably.

There was no systematic, objective, and reliable means for determining the quality of early childhood programs.

"We developed an item and asked the child care coordinators to try it," said Clifford. "The coordinators gave us feedback, and we would revise."

They also sent a draft version of the scale to experts for their review and field-tested a later version in 1978. The design and intent behind the ECERS helped to capture "process quality"—the classroom interactions between staff and children, among adults, and among children, as well as how children related to materials and activities in

Thelma Harms

the classroom—which proved to be an excellent predictor of child outcomes.

Initially, consultants, trainers, directors, and teachers adopted the ECERS, but the scale's field-tested reliability and validity quickly attracted researchers—and soon college and university teachers also began embedding the scale in their teacher education courses. For much of the 1980s and 1990s, the ECERS would prove an effective tool for evaluating program quality, and the scale also found significant use in program improvement efforts. The ECERS also marked a key development in FPG's budding emphasis on the study of typical child care.

In 1998, FPG's Debby Cryer would join Harms and Clifford to co-author a revised edition of the scale (the ECERS-R), which the trio further updated in 2005. In 2014, in the same week the ECERS-3 was published, the Kaplan Early Learning Company and the Leon & Renee Kaplan Foundation for the Health and Well-being of Children would present the Innovator Award to the pioneering creators for "forever changing the view of quality care in childhood education."

By then, the ECERS had long since achieved national notice from FPG's groundbreaking Cost, Quality, and Child Outcomes Study. (More on this study later.) The ECERS also had spawned demand for scales for infants and toddlers, family and child care homes, and school-age care programs. As the FPG innovators were accepting their award in 2014, 36 states were using the ECERS or one of its sister scales in their child care Quality Rating and Improvement Systems—programs designed to maintain quality in early care and education environments, as well as in some after-school settings. And the scales already had generated extensive global interest.

For Families with Children with Disabilities

Throughout the 1970s, FPG's mission had expanded to accommodate broader questions regarding education, child care, health, and services. At the end of the decade, Jim Gallagher launched a major research initiative combining two other primary areas of emphasis at FPG: *families* and *children with disabilities.*

By this time, other centers also had been focusing on developmental disabilities, including the Kennedy Center on Mental Retardation Research at Peabody College (now Vanderbilt University), the Experimental Education Unit at the University of Washington, and the Juniper Gardens Children's Project at the University of Kansas, each of which had begun their work around the same time FPG had opened its doors. Their early themes had emphasized models and practices in relation to poverty, risk, and identifiable disabilities. Gallagher took FPG into the 1980s with consecutive five-year grants for the Carolina Institute for Research on Early Education for the Handicapped (CIREEH, or "Cheery" at FPG). He served as principal investigator for a team of eleven researchers, which included future FPG director Don Bailey, special education pioneer Ann Turnbull, and other notable experts.

CIREEH's ecological research on families with young children with disabilities comprised eight projects that studied characteristics of successful parents of children with disabilities, as well as family networks, parent involvement for programs of children with disabilities, child assessment, curriculum development, and much more. By the end, the project had produced extensive findings—including the key understanding that families could handle the birth of a child with disabilities, especially when the family received early support from professionals. In fact, one of CIREEH's hallmarks was its charge to specialists to focus on families and not merely on the children they serve.

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CIREEH's legacy also includes the creation of dozens of curriculum items for young children with disabilities and numerous assessment scales—and, literally, the book on family assessment. Don Bailey and fellow CIREEH researcher Rune Simeonsson's *Family Assessment in Early Intervention* would be the culmination of their five-year exploration of families with young children who were enrolled in home-based interventions. CIREEH also would give rise to a later study by Bailey, Virginia Buysse, Rebecca Edmondson, and Tina M. Smith that explored professionals' points of view on family-centered services in early intervention and led to the subsequent creation of *FOCAS*, the *Family Orientation of Community and Agency Service* scale.

"It's a natural evolution, particularly at an institution such as FPG, where we have many researchers working together and in collaboration with others," Bailey later said. "Taking the research of one project and designing a more refined project to answer questions raised by the first project is a natural progression for us. And more often than not, this leads to implications and help for personnel preparation, professionals, and families."

Policy and Public Service

In addition to an early emphasis on technical assistance, FPG worked to bridge the chasm between research and real-world solutions by bonding research to policy.

In 1978, funding from the Bush Foundation elevated FPG's role in informing public policy. Over the years, the Bush Institute for Child and Family Policy would operate a professional training program to link knowledge to action by analyzing policy, holding workshops and seminars, and making recommendations to policymakers. UNC faculty taught and mentored graduate students, including Ellen Peisner-Feinberg (who would become instrumental in heading annual evaluations of pre-kindergarten programs in North Carolina and Georgia, among other projects) and such post-doctoral fellows as Marvin McKinney (who would become co-principal investigator for an FPG project that explored the school success of young boys of color, as well as a long-time FPG ally and member of FPG's executive leadership board). In addition to Jim Gallagher, the faculty involved with the Bush Institute included future FPG fellows—researcher Jonathan Kotch, and special education pioneers Ann and Rud Turnbull—as well as FPG senior researcher Ron Haskins.

While at FPG, Haskins also would testify before the North Carolina state legislature about recommendations for improving child care, which included reducing the infant-staff ratio to 6:1. His career later would include fourteen years on the staff of the House Ways and Means Human Resources Subcommittee, a stint as senior advisor to the President for welfare policy at the White House, and key roles as senior fellow in the Economic Studies program and co-director of the Center on Children and Families at the Brookings Institution. He also would become a senior consultant at the Annie E. Casey Foundation. Alongside McKinney, he still advises FPG today as a member of its executive leadership board.

As FPG's reputation heightened, its expertise and influence spread into more arenas.

At the time of the Bush Institute's founding, North Carolina governor Jim Hunt already had recruited Gallagher to lead the state's fledgling high school competency testing commission, and, thanks in large part to Gallagher's work, the North Carolina School of Science and Mathematics was opening that very year. Although Gallagher was responsible for much of FPG's early influence in public, professional, and academic spheres, as FPG's reputation heightened, its expertise and influence spread through more people into more arenas. ECERS co-creator Dick Clifford later would become president of the National Association for the Education of Young Children, which over the years would count several FPG experts among its board members, including Sharon Ritchie, Cristina Gillanders, Jana Fleming, and Lynette Aytch. Clifford also later would take a leave of absence from FPG to direct the state's then Division of Child Development, helping Governor Hunt launch Smart Start, the state's highly-respected early childhood policy initiative.

The early years of FPG's entry into policy and public service began a level of engagement that would continue to take many forms across

The early years of FPG's entry into policy and public service began a level of engagement that would continue to take many forms across the following decades.

the following decades. Policy and its implications would become an even more important focus of FPG's projects in the 1990s: in Gloria Harbin's Early Childhood Research Institute on Service Utilization; in Clifford's Cost, Quality, and Child Outcomes study; in Bryant's decade-long evaluation of the Smart Start Initiative; in FPG's nine-year National Center for Early Development and Learning; and in other projects. Gallagher and Mary Ruth Coleman, for instance, would continue a commitment to gifted education by examining the impact of policies on identifying gifted students from culturally diverse and low-income families—work that would become integral to the U.S. Office of Civil Rights in its efforts to address underrepresentation of minority students in gifted education.

Over the years, FPG experts would testify before Congressional committees and brief their staffs. They would serve as leaders in professional associations, government task forces, and community organizations, as well as on advisory, editorial, and foundation boards. After the turn of the millennium, a new group of experts at FPG also would begin to embed policy with mechanisms for bringing it quickly and effectively into real-world situations through the use of implementation science.

And, as members of North Carolina's Early Childhood Advisory Council, Haskins, Clifford, and Coleman would still be serving the state on the eve of FPG's 50TH anniversary—35 years after the Bush Institute first opened.

Marvin McKinney

Inclusion: Philosophy and Practice

At future-director Don Bailey's initiation, FPG's child care program welcomed children with disabilities in 1984, an important marker of FPG's strengthened commitment both to researching and practicing inclusion—the right of all children, regardless of ability, to participate as full members of schools, communities, and society. For young children with disabilities, inclusion largely means that instead of moving to isolated classrooms to receive specialized services, the services are brought to them in regular classrooms alongside their typically developing peers.

When administrators, specialists, teachers, and families actively collaborate to meet the needs of children with disabilities, inclusion benefits children with and without disabilities. Research shows that those with disabilities learn from their typically developing peers and make developmental gains. They engage in more positive behaviors, and their parents report gains in social skills and acceptance by peers. Inclusion also prepares children with disabilities for adult life in the

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community. Meanwhile, typically developing children become more accepting of human differences and aware of other children's needs. They also have less discomfort around people with disabilities and less prejudice about people who behave differently. Inclusion additionally provides opportunities for friendships, and it can help maintain a typical family structure by keeping siblings with different abilities at the same school.

In 1986, new federal legislation amended the *Education for All Handicapped Children Act* to offer states incentives to provide services to children with disabilities from birth to age 2 and reasserted the importance of the inclusion of children with disabilities in community programs. Two years before, however, FPG already had opened its doors to children with disabilities, and within a decade, child care director Maggie Connolly would report that 30% of enrollees in FPG's own program were children with disabilities.

"They receive specialized therapies and interventions in the classrooms and on the playground during the regular routines and activities of the day," said Connolly. "In this model of inclusion, intervention strategies for individual children are incorporated in a group setting and may involve other children that want to participate."

The model was collaborative—a team approach, which, like the philosophy behind CIREEH, prized family involvement. Classroom teachers and specialists also met regularly to strategize and adapt activities so that all of the children could participate in all tasks similarly.

For Connolly, the results of such a model were apparent. "Children see their peers with disabilities as more the same than different," she said.

FPG scientists would benefit over the years from having such a high-quality model of inclusion at work in the very same building as some of their offices. They would study the impact of inclusion on families, field-test curriculum materials, and develop guidelines for individualizing inclusion for each particular child. FPG's Barbara Goldman and Virginia Buysse would study relationships—including friendships—among children at the center and other locations and find that although typically developing children might have been curious about their peers' differences, this didn't indicate rejection of children with disabilities.

Yet, FPG's understandings about inclusion weren't confined to the children in its own program and local area. Before leaving for Indiana University in between his tours at FPG, future FPG director Sam Odom began conducting research on the benefits of inclusion, and

with Ruth Wolery he translated the research into a practical guide for administrators across the country. Robin McWilliam, Mark Wolery, Debby Cryer, and other key FPG researchers also studied inclusion's benefits, and when Bailey and colleague Rune Simeonsson studied infants in families who were receiving visits from North Carolina Human Resources, they worked with a young researcher named Pamela J. Winton, who two decades later would help to found what would become the leading conference on inclusion in the nation: FPG's National Early Childhood Inclusion Institute.

Inclusion would become and remain a strong area of emphasis for FPG's professional development and technical assistance. As an approach and a philosophy, many FPG projects would embed tenets of inclusion into their operations, while others, like FPG's Partnerships for Inclusion, specifically would center on inclusion. After PFI launched, it would play a crucial role across two decades in North Carolina in facilitating high-quality programs for children with disabilities in inclusive settings. Pat Wesley directed the project, which over time supported public schools, child care and preschool programs, early intervention agencies, child care resource and referral agencies, local Smart Start partnerships, and other organizations. Wesley's group operated out of offices in three regions across the state, drawing attention through community forums to the importance of inclusion, while providing consultation, training, and resources to buttress inclusive services.

Mark Wolery in FPG's child care center

Years after Partnerships for Inclusion began, Kathy Baars of the North Carolina Department of Instruction would note aspects of its dual ability to spread the word and impact programs. "PFI has been instrumental in changing attitudes about children with disabilities," Baars said, "and has assisted preschool programs in providing inclusive settings with blended funding." Wesley and her team had transformed a 17-county pilot project into a 100-county network of programs.

When PFI's technical assistance project had begun, the field was amidst a complicated paradigm shift—and FPG would emerge from it not only as an invaluable resource for North Carolina but as an even more prominent national player in technical assistance.

Paradigm Wars and the Right Questions

Many years after a complex and difficult paradigm shift, FPG's Lynne Kahn would admit that describing her work had become the curse of her Thanksgiving dinners. The FPG scientist, who became a central figure in the leadership of several technical assistance centers, said that explaining the nitty-gritty of her job to family members, without jargon, was extremely difficult.

The term "technical assistance" itself offered little help. "As far as I can tell, the word technical is as useful as the *e* on the end of Lynne," she said. "It doesn't add anything."

She settled on a broad but simple definition of what technical assistance really means: *helping people do whatever it is they're trying to do more efficiently and more effectively.* Whom FPG has helped, what those groups have wanted to accomplish, and how FPG has provided TA have evolved over the years to meet the demands of new research and paradigm shifts. Yet, a two-pronged approach has remained constant—a dual focus on process and content.

Because FPG's technical assistance pioneers could ask and answer the right questions—and evolve and adapt—they would amass a four-decade record, one still ongoing, of continuous federal funding to help ensure better lives for children with disabilities.

In the 1970s and early 1980s, primarily under director Pat Trohanis, the mission of FPG's Technical Assistance Development System (TADS) had centered on helping innovative, federally-funded early childhood initiatives conduct demonstration outreach projects, such as those designed to address early language, provide intervention for children with autism spectrum disorder, or train respite workers to relieve families. By 1985, TADS had helped 530 local programs serving children through schools systems, hospitals, universities, and private service agencies—and in 1985 alone Trohanis's team advised 83 community-based projects.

On process, TADS helped these projects identify and understand their innovations, which in turn led to developing approaches to evaluate the implementation of the innovations. TADS assisted with project management and planning, including facilitating the timing necessary to study, implement, and evaluate innovations, all within the typical three-year cycle of these federal grants.

FPG also provided integral support on content. For each focus area of these grants, TADS brought together experts and facilitated interactions among grantees who were studying the same topic, so that they could share and "push the envelope" with one another. TADS also connected expertise that didn't have grant funding but that could offer important insight.

"We were a hub," said Kahn, who worked closely with Trohanis as part of his core leadership staff for several TA projects at FPG. "TADS

brought together those who were on the cutting-edge, investigating approaches to solving problems."

According to Kahn, TA at FPG continued its dual focus on process and content even as the 1980s saw great advancement in the field of early childhood special education and an accompanying paradigm shift from clinic-based and separate groupings for young children with disabilities to more integrated settings and natural environments. New federal funding for the development of early intervention systems in individual states meant that FPG undertook a series of projects designed to support state administrators who were developing a state-coordinated system of services. These services required, supported, or encouraged effective practices for families and children.

"We began morphing into areas of expertise that were more at a state-systems level," said Kahn. *What does it take to build a system?* became the over-arching, driving question behind TA during this time. What infrastructures, policies, and supports did states need to implement to facilitate the use of effective practices in service delivery? What finance systems would support best practice? What kinds of personnel competencies and personnel systems would work best? What kinds of child-find systems should states utilize? How could FPG facilitate strategic planning?

In 1987, FPG's TA expertise coalesced under NECTAS (the National Early Childhood Technical Assistance System). In 2001, Trohanis and his team would reconceive a model of TA that would result in demonstrable improvements in outcomes for children. NECTAC (replace "System" with "Center") was born, and in 2012, NECTAC in turn would evolve again to become what is today's Early Childhood Technical Assistance Center. Because FPG's technical assistance pioneers could ask and answer the right questions—and evolve and adapt—they would amass a four-decade record, one still ongoing, of continuous federal funding to help ensure better lives for children with disabilities.

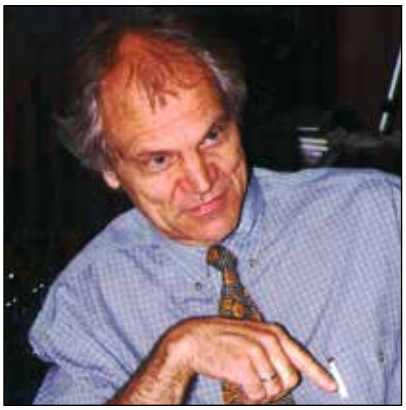
Influencing the Next Generation of Teacher and Provider

The 1986 amendments to the *Education for All Handicapped Children Act* essentially had mandated services to young children with disabilities by means of incentives for providing infant-toddler services and explicitly requiring states by 1990–1991 to offer a "free and appropri-

ate public education" to eligible 3-to-5-year-olds. The 1986 legislation also specified that children with disabilities should receive family-centered and interdisciplinary services.

The clock was ticking on compliance. But had professionals received training in the new approach? And were faculty at institutes of higher education preparing their students to become effective service providers?

To find out, the year after the new legislation, Don Bailey and Rune Simeonsson established the Carolina Institute for Research on Personnel Preparation (CIRPP), an interdisciplinary collaboration across ten departments at UNC. Their project provided a crucial foundation for informing and engaging faculty. They hoped to influence the next generation of teachers and providers by helping to ensure they received the best possible training before they entered the field. That meant first informing and influencing the faculty who developed and taught courses in education at colleges and universities, as well as other professionals who trained people on the ground.



Rune Simeonsson

Bailey and Simeonsson surveyed college and university programs across disciplines and found that faculty lacked expertise and that direct service providers needed training about new regulations. To make matters worse, families and professionals typically were not making decisions together about changing practices. Bailey and Simeonsson guided the creation of new curricula, examined instruction strategies, and encouraged family-centered attitudes among providers. The project also helped to develop in-service training approaches and tested family-centered systems for service coordination.

Bailey and Simeonsson's work would also influence later research projects in the 1990s designed to facilitate personnel development. FPG's Pam Winton, who had started working with Bailey and Simeonsson a decade earlier, and Camille Catlett would lead the subsequent Southeastern Institute for Faculty Training, which emphasized system reform in institutes of higher education.

"We were trying to bring the ivory tower and the trenches together, and neither side was comfortable with that. It was like trying to arrange a marriage between two people who didn't even want to go out on a blind date together."

"Our research revealed the enormous personnel challenges," Winton later said of CIRPP, explaining the impetus for her new project with Catlett. "What we needed were strategies and models to help personnel development systems make changes. And the biggest challenge was that there was no one personnel development system."

According to Winton, most practitioners did not necessarily want to be trained by someone in the "ivory tower," and state agencies overseeing in-service training wanted trainers who could easily relate to the daily challenges facing practitioners. "We were trying to bring the ivory tower and the trenches together, and neither side was comfortable with that," Winton said later. "It was like trying to arrange a marriage between two people who didn't even want to go out on a blind date together."

The project's success in turn seeded such projects as the Southeastern Institute for Faculty Training Outreach, Supporting

Change and Reform in Interprofessional Preservice Training (a.k.a. "SCRIPT"), New Scripts, and Natural Allies. In nearly 30 states, these federally-funded projects helped bring reform, improving the training of teachers and specialists who served young children with disabilities and their families. Thanks to these projects, a wide array of constituencies at many levels collaborated to create change in how teachers and specialists became prepared for their jobs. These projects also fortified FPG's traditions of professional development and initiatives designed to support higher-education faculty—commitments FPG still fulfills today.

Sharon Landesman, FPG's First Woman Director

During FPG's first half-century, three directors provided leadership for a decade or more: Jim Gallagher, Don Bailey, and Sam Odom. In between, researchers with a wealth of expertise have stepped in to serve in shorter durations, sometimes wearing the "interim" or "acting" label, and always working with an evolving core team of leaders who have contributed to FPG's guidance over the years.

When Gallagher stepped down as director in 1987, he was far from the end of his career at FPG. He would remain a crucial presence for over the next quarter-century, well into the tenure of present-day director Sam Odom. But as FPG transitioned from the 1980s to the 1990s, in between the Gallagher and Bailey eras of leadership, two important figures in FPG's history became stewards of the directorship: Sharon Landesman and Al Collier.

When Sharon Landesman arrived in 1987, she became FPG's first woman director. (Later, Donna Bryant and Barbara Wasik each would lead FPG.) Landesman quickly put in place a five-year plan, reorganizing FPG structurally by area of inquiry and installing FPG stalwarts Craig Ramey, Joe Sparling, and Barbara Wasik into newly created positions as associate directors. The new director's intent was to further heighten FPG's collaborative work, internally and externally, and in 1988, she also became co-director of the North Carolina Mental Retardation Research Program. Landesman received kudos for her instrumental work in cross-disciplinary mental retardation research at the university, which led to new funding. By co-founding and working with the Carolina Consortium on Human Development, she also invigorated FPG's continuing mission of providing training to post-doctoral fellows and graduate students.

Although Landesman left FPG before the full implementation of her five-year plan, when she and Craig Ramey went to the University of Alabama-Birmingham, it opened the director's chair for longtime FPG researcher Al Collier. Collier's presence at FPG had originated during the first years of the Abecedarian Project—and his work remains part of FPG's long legacy of studying children from the medical perspective.

Sharon Landesman

FPG's Medical Research

Al Collier had begun taking throat cultures from children in FPG's child care program in the early 1970s, and by the time he had agreed to serve as interim director in 1990, FPG's medical research was far broader and more varied.

FPG scientists already had made important discoveries based on studies both inside and outside of FPG's child care center. They had found that children who lived with smokers experienced more lower-respiratory tract infections and more incidents of otitis media, and they also discovered that viruses could disable natural defenses against childhood bacteriological infections. Melinda Beck had determined that particular nutritional deficiencies enabled the mutation of a certain virus that could cause nerve disorders and a type of heart disease. Craig Ramey, Joe Sparling, Barbara Wasik, and Donna Bryant's eight-site Infant Health and Development Program had studied how educational and medical services could affect learning and health problems in low birthweight babies. In addition, Bush Institute faculty Ron Haskins and Jonathan Kotch had attracted media attention from NBC, PBS, CBS, and other outlets when they authored a report that found a higher frequency of infectious illnesses in children attending day care than in those receiving care at home. In an early instance of FPG's interest in emotional health, Earl Schaefer and Chuck Burnette determined that the quality of a marriage had a major impact on the happiness and mental health of the wife; when Burnette developed a pre-marital inventory to assess compatibility, the U.S. Catholic Church adopted it for its premarital counseling program.

Ron Haskins (here) and Jonathan Kotch had attracted media attention with a report that found a higher frequency of infectious illnesses in children attending day care.

As Collier became interim director, FPG's research, service, and mentorship continued on a variety of fronts. FPG began administering off-site developmental and hearing tests via a mobile audiologic unit. The Department of Education funded a 5-year grant for three FPG post-doctoral fellows. With UNC's School of Education, FPG opened the Educational Leadership Program to develop competent leaders in the state and to offer an exemplar for the country.

FPG scientists had made important discoveries based on studies both inside and outside of FPG's child care center.

Only a couple years after the television program *Bodywatch* had showcased the Abecedarian Project across the country, ECERS partners Thelma Harms and Debby Cryer were creating *Raising America's Children*, a 10-part miniseries that would air nationally. Harms and Cryer developed study guides for child care providers and teachers, who, in turn, received training credit in many states for viewing the series. Meanwhile, Barbara Goldman was producing *SMALLTALK: Creating Conversations with Young Children* from hours of film shot in FPG's child care center. Her six-videotape project showed providers, preschool teachers, and other early childhood specialists how to help infants and young children with and without disabilities develop skills for successful communication and interaction.

And one of Don Bailey's studies was drawing to a close, perhaps freeing some time for his next major role at FPG.

A Center Becomes an Institute

broadening inquiry, ongoing evolution, and infusing policy and practice with research

"The key is identifying an important problem, studying as many aspects of that problem as possible, brainstorming with the beneficiaries (teachers, parents, etc.) of the research about a number of possible solutions, and then trying out solutions that have a good chance of succeeding."

—Don Bailey

Don Bailey

FPG co-founder Hal Robinson had died a decade before Don Bailey became director at FPG, but not before leaving a lasting impression on Bailey when the future director was a student in Robinson's class on developmental theory at the University of Washington. "No developmental theorist can be fully understood without also understanding what was going on at the time she or he lived," Robinson had told the class. When Bailey later would reflect on FPG's 40th anniversary, he would evoke Robinson's words and draw the analogous argument about FPG's history: "FPG cannot be fully understood without knowledge of the events that led to its birth and those that have occurred during its 40-year lifetime." Bailey himself was a central figure in this history, and his tenure as director explains much about how FPG moved successfully through the 1990s and into the new millennium.

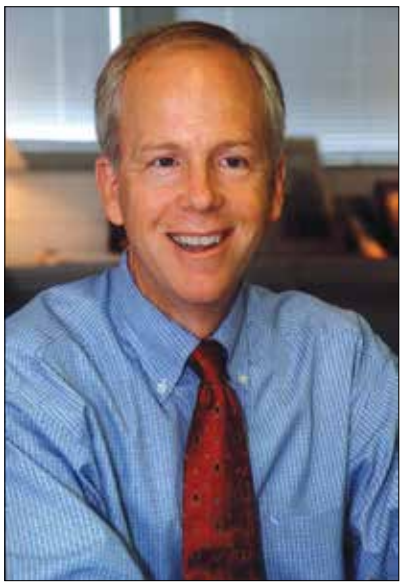
He, Robin McWilliam, and Peg Burchinal recently had wrapped up a study that followed the developmental trajectories of children randomly assigned to same-age or mixed-age child care. While experts believed that children would be influenced in different ways by younger, older, or same-aged peers, at the time of Bailey's study only anecdotal evidence supported the notion, and almost no research had attempted to study longitudinal effects of "age mixture" on development. Bailey and his team examined skills overall and in five domains, and among their many findings was the determination that the children in mixed-age groups scored higher than children in same-aged groups when younger, but that the effects decreased and then disappeared by age 5. In addition to its seminal findings, the end of Bailey's study marked a transition to his next major role at FPG.

FPG the center became FPG the institute—and one of the field's leading institutes, at that.

Starting in 1992—after a widespread search that had brought six finalists to Chapel Hill—Bailey led FPG for 14 years, touting and supporting FPG's work, recruiting more researchers, and mentoring others. He also helped researchers to coalesce as teams for major projects on early education and on services for children with disabilities, attracting unprecedented support for work to advance FPG's goals—five times as much funding the year he stepped down, in fact, compared to the year before he became director. He would more than double the size of the staff and preside during a booming era for FPG's scope of operations, when FPG the *center* became FPG the *institute*—and one of the field's leading institutes, at that. His colleagues would praise his vision, teamwork, generosity, and even his sense of humor, and FPG entered a time of broadening inquiry, continued nimbleness and evolution in its expert technical assistance projects, and purposeful enmeshment of research in policy and practice.

Bailey's own research powered a sizeable piece of FPG's expansion. Before he left FPG to become a distinguished fellow in early childhood development at Research Triangle International, he would serve as principal investigator or co-principal investigator on numerous grants and garner numerous awards for his scholarship.

Don Bailey



Fragile X Syndrome would become a primary focus of his work, and thanks in large part to Bailey's projects, FPG's expertise in Fragile X would become renowned.

Fragile X Syndrome

"You could say we have put Fragile X on the map," Bailey said, when he later would reflect on more than a decade of FPG research on the most commonly inherited form of what then was classed as "mental retardation."

Bailey became FPG's director as groundbreaking new science was advancing understandings of the disability. "The gene for fragile X had just recently been discovered, and there was lots of excitement, for many reasons," Bailey later wrote. "Although the disorder had been described for more than 20 years and it was almost certainly inherited, what went wrong and how it was inherited were not known. Officials at the NIH were excited because it was one of the first examples of how the Human Genome Project, a massive effort to 'map' the human genome, could lead to discoveries pinpointing the causes of hundreds, if not thousands of disorders."

"You could say we have put Fragile X on the map."

In 1969, Herbert Lubs first had discovered the fragility in the X chromosome that the syndrome's name still bears. Twenty-four years later, Bailey's team was working in the advent of the new discovery that Fragile X resulted from a mutation that disrupts messages that cause the manufacture of a particular protein that normal brain development requires. People can carry and transmit Fragile X Syndrome even without experiencing strong effects from it, unless they have the full mutation. Its effects vary by gender, with the full mutation more severely affecting men, with delays ranging from minor to profound cognitive and social impairments.

Shortly after Bailey became director, FPG launched a longitudinal study of Fragile X, and over the years, the Carolina Fragile X Project would expand and evolve as a collaborative, multidisciplinary team studied the condition. "When we started our research in 1993, no one had studied the earliest development of children with Fragile X," Bailey later wrote. "Finding nearly a hundred families of young children with Fragile X was quite a challenge. But with the help of a great research team and lots of people willing to help, we did it."

"The gene for Fragile X had just recently been discovered, and there was lots of excitement."

Thanks to funding from the Office of Special Education Programs, Bailey and co-principal investigator Deborah Hatton began research on preschool boys (with a separate study commencing on girls three years later), and continuous funding made it possible to follow them through elementary school and middle school.

The results of their work were profound. Bailey's team determined that parents were first to identify problems with Fragile X children much earlier than the children typically were diagnosed with developmental delays—which then led to nearly another year before a formal diagnosis of Fragile X Syndrome at 32 months of age, on average.

Some children with Fragile X progressed much faster in their early development than others, and about 25% of the boys with Fragile X also were classified as autistic and experienced more significant delays than those with either diagnosis on its own. By second grade, most boys with Fragile X were receiving their education in self-contained classrooms only serving children with disabilities, and at age 8, many students with Fragile X still faced challenges in basic functioning. Bailey's projects also had gathered data about the early services children with Fragile X were receiving—and how parents felt about those services—which was essential for a major conference at which experts gathered to discuss the best design of early intervention for children with the syndrome.

Bailey and his colleagues' research led to widespread understandings of Fragile X, its detection, strategies for intervention, and best approaches to support families. "No one person or one discipline can fully understand any phenomenon," Bailey wrote. "Over the years we have worked with psychologists, neurologists, psychiatrists, special educators, genetic counselors, anthropologists, speech and language pathologists, occupational therapists, and many others who have helped to provide insights into the multifaceted aspects of this disorder."

By the mid-1990s, FPG scientists and collaborators had begun to broaden the scope of their inquiry into different aspects of Fragile X. Bailey and FPG's Joanne Roberts were fixtures on multiple studies, some of which also would include Hatton and other researchers: Jane Roberts, Penny Mirrett, Annette Taylor, David Zajac, Stephen Hooper, Peter Ornstein, Peg Burchinal, Gary Martin, Jenni Schaaf, Martie Skinner, and others. With a wide variety of projects they explored speech and language, hearing, relationships between physiological and behavioral variables, medication and its effects, memory, responses to environment, decision-making and problem-solving, social-emotional development, challenging behaviors, and the quality of life for parents.

"The amazing thing about this research is the many directions it has led us over the years," said Bailey. "We have learned so much from the children, from families, and from other researchers that has caused us to keep asking new questions and seeking new answers."

By the time Bailey's tenure at FPG was drawing to a close, he had worked with stakeholders to try to alleviate some of the family stressors that come with having a child with Fragile X Syndrome, which his own research had revealed, and he had become an active proponent of changes in policy and practice, including establishing procedures for screening newborns for the syndrome.

The Cost of Quality

The Abecedarian Project and subsequent studies placed FPG at the leading edge of early childhood education. "The fact that researchers at FPG were examining early childhood education before the country focused on early education as a major policy issue placed FPG researchers at the forefront of the next wave of research," said Peg Burchinal, longtime director of FPG's Data Management and Analysis Core. In FPG's incubatory climate, through the 1990s and into the

new millennium, scientists would fuel numerous key projects that would advance the field.

"FPG's involvement reflected the entrepreneurial nature of the researchers," Burchinal said.

FPG scientists had built substantial experience in early education *before* it became a national priority, and thus FPG became a vanguard on early education research at a time when more mothers were working and the country began to focus on the promise of quality child care to address inequalities.

The year after Don Bailey became director, FPG's Dick Clifford began serving as one of four principal investigators on a five-year groundbreaking study of child care centers in North Carolina, Colorado, California, and Connecticut. In addition to Burchinal, FPG experts joining him on the Cost, Quality, and Child Outcomes project included Ellen Peisner-Feinberg, who had participated in the Bush Institute for Child and Family Policy as a graduate student; Debby Cryer, who later would join Clifford and Thelma Harms as co-author of the revised version of the ECERS; and Donna Bryant, who at the time was serving as principal investigator for FPG's Evaluation of North Carolina's Smart Start initiative. Cryer and Peisner-Feinberg also would serve as principal investigators: Cryer, when Clifford took leave to work on the Smart Start Initiative, and Peisner-Feinberg, for the Cost, Quality, and Child Outcomes study's longitudinal look at children as they moved from preschool classrooms to schools. In addition, in 1994 a young Noreen Yazejian joined the study as project coordinator; she later would head FPG's evaluation of the Educare Learning Network, among other projects.

Dick Clifford in FPG's child care center

The Cost, Quality, and Child Outcomes study utilized the ECERS and other measures to assess the quality of over 400 child care centers with the intent to determine if high-quality child care was more expensive, whether quality affected outcomes, and how it might be best to allocate funding that results in high-quality care. In each of four states, Clifford's team randomly chose 50 nonprofit and 50 for-profit centers, focusing on classrooms for infants or toddlers and preschoolers.

The results made national headlines. Only 14% of the programs earned ratings that indicated developmentally appropriate services. In fact, the study found 10% of the preschool programs and 40% of infant-toddler programs were poor quality.

"There were serious issues, especially for infant and toddler

FPG became a vanguard on early education research at a time when more mothers were working and the country began to focus on the promise of quality child care to address inequalities.

care," said Cryer. "Practices were not meeting basic health and safety needs. For example, diapering arrangements were not safe, as in the case of diapering tables without rails that children could fall from, and procedures such as hand washing were not followed."

It was clear evidence that most children in child care centers across the country were receiving poor or mediocre care. The study also determined that children from low-income homes received higher-quality care when in publicly funded programs—and that the quality of care predicted children's later social, academic, and language skills.

The study also evaluated the relationship between cost and quality. "It is no surprise that higher-quality programs cost more," Clifford later wrote. "Higher quality programs had lower child-to-staff ratios and teachers with more education and specialized training in working with young children."

Added costs accompany such features, according to Clifford. "However, economists on the team found that it is possible to increase quality by a modest amount with only about a 10% increase in costs. This seems to work mostly for those programs in the middle level of quality."

Policy changes included heightened regulations for child care programs, requiring both initial and ongoing staff training, and employing more highly educated staff.

Burchinal, also a veteran of the NICHD Study of Early Child Care and Youth Development, later characterized the Cost, Quality, and Child Outcomes study's impact on policy as "perhaps the most influential" of any child care research.

"The study had an impact on standards," said Clifford. "It got tremendous publicity, and motivated states to act." Policy changes included heightened regulations for child care programs, requiring both initial and ongoing staff training, and employing more highly educated staff.

"It created wide-scale concerns about the quality of child care among parents and policymakers," Burchinal said. "The Cost, Quality, and Child Outcomes study led to the creation of the Quality Rating and Improvement Systems—and it contributed to the development of pre-kindergarten programs."

Smart Start and Three Guys Known as "Frank," "Porter," and "Graham"

In 1993, the Division of Child Development in North Carolina's Department of Health and Human Services asked FPG to evaluate the state's fledgling Smart Start initiative. The statewide initiative was comprehensive and ambitious, designed to serve all children under age 6 in order to ensure they entered school healthy and ready for success, as well as to provide support for their families. State politics surrounded the initiative—and FPG's evaluation of it—as demands for proof of Smart Start's effectiveness began at its inception.

"People wanted data as early as 1994, when many of the programs had only just started," said Donna Bryant, who directed the evaluation. "We gave them data on numbers of children being served and how Smart Start was being implemented. Only later could we measure whether services and children's readiness had actually improved."

Over ten years, the evaluation included dozens of studies, generated 35 reports, and confirmed the effect of Smart Start services on school readiness. "We showed that children in higher quality child care do better in kindergarten," Bryant said. "This provided the state with the evidence it needed to continue legislative support for Smart Start."

When Bryant's team provided proof of Smart Start's effectiveness, and as Smart Start grew from its original 18 counties to cover all 100 in the state, FPG could not remain isolated from politics. She later recalled how over the evaluation's 10-year span the entirety of FPG was audited three times, down to questions about how much lotion teachers used in FPG's child care center after washing their hands. "Of course, teachers wash their hands a lot," Bryant said. "All accounts at FPG were fair game."

Governor Jim Hunt had been elected to the office for the second time in 1992 and had day care-aged grandchildren, which perhaps prompted his interest in helping young children throughout the state. Smart Start became a political hot potato in part because it was Hunt's creation.

"It was hard to avoid the press sometimes in those years, because they were all over us," Bryant said. She explained how she was at work on a Saturday morning when she fielded a call from a reporter, who seemed surprised to have reached her. He asked her about another of FPG's dozens of active projects at the time, for which Bryant only was able to provide some limited information. "I said, 'You know, you reporters all must think there are only three of us who work at FPG: Frank and Porter and Graham.' And darn if they didn't put that in the newspaper."

Yet, her team continued its work across a decade-long series of annual evaluations, identifying areas in need of improvement and training a network of early childhood evaluators who would support Smart Start's local partnerships. These partnerships, the local nonprofit organizations administering state funds, were central to Smart Start's structure. In order to support Smart Start's objective to increase child preparedness for school, the local partnerships were devising their own strategies for services in three primary areas: child care and education, family support, and health. Across a variety of geographical settings, Bryant's group analyzed over 100 preschool child care programs in 20 such partnerships.

Bryant's team used the ECERS to explore child care center quality. "The analysis showed that child care quality in this sample of child care centers has increased significantly over time, with the increase significantly related to the amount of a center's participation in Smart Start activities," Bryant said at the close of the evaluation. "Children who attended higher quality centers scored significantly higher on measures of skills and abilities that are deemed important for entering kindergarten ready to succeed. These results were over and above the effects of gender, ethnicity, and income."

Donna Bryant

During FPG's evaluation of Smart Start, other states and communities contacted FPG with requests for consultative help. "Smart Start quickly became the national model for how to collaboratively provide early childhood services for young children and their families," Bryant said, "and other state leaders visited North Carolina and attended Smart Start's annual conference to begin implementation of similar programs in their states."

When Bryant's team provided proof of Smart Start's effectiveness, and as Smart Start grew from its original 18 counties to cover all 100 in the state, FPG could not remain isolated from politics.

In 2004, the 10-year Smart Start evaluation recently had ended when Bryant explained that because of it FPG was equipped for new evaluation projects. Bryant and former director Jim Gallagher had formed FPG's Early Education Evaluation Initiatives Group, along with Virginia Buysse, Dina Castro, Lynne Kahn, Kelly Maxwell, Ellen Peisner-Feinberg, Noreen Yazejian, and Kathleen Yonce. "We learned so much about evaluating comprehensive community initiatives, and we helped North Carolina learn what works to improve early childhood programs," Bryant said at the time. "Smart Start has been an innovative and successful initiative."

On the Eve of FPG's 30th Anniversary

In 1995, Bailey initiated a comprehensive strategic review of FPG, an internal look at FPG's activities that included a survey of all staff and affiliates, two "town meetings," a full-day retreat, and several iterations of a culminating report.

"Collectively," Bailey and his management team wrote in the report's introduction, "these projects and activities reflect a broad array of work focused around a central theme of improving the lives of young children and their families, particularly in the context of child care settings and public services designed to support children and families."

FPG's work in 1995 typified the decade's broad array of research and service, including the recent publication of the age 15 follow-up of the Abecedarian Project but extending far beyond the groundbreaking findings and recognition the project would continue to garner. On the eve of FPG's 30th anniversary, NECTAS and other technical assistance projects were impacting all U.S. states and territories. Pat Trohanis and Shelley deFosset also began working with the Step By Step program to create early childhood demonstration projects in 17 emerging democracies in central and eastern Europe and in the former Soviet Union; the George Soros-funded project brought teachers and administrators from those regions to FPG for additional training. Jim Gallagher and Mary Ruth Coleman were in the early years of a project that brought FPG's technical assistance expertise to a statewide project in North Carolina, helping school districts develop plans for gifted education—work that led to a change in state law on identifying and serving gifted students.

Pamela Winton and Camille Catlett's personnel preparation programs also were operating at full tilt in the southeastern U.S. In addition, not only were the Smart Start evaluations and the Cost, Quality, and Child Outcomes Study well underway, linking FPG's research to policy, but Bryant and Peisner-Feinberg had begun running a Head Start Quality Research Center. Their team included graduate student Dina Castro, who years later would become principal investigator of FPG's Center for Early Care and Education Research—Dual Language Learners.

FPG's research on Fragile X Syndrome was expanding, and FXS researcher Joanne Roberts—along with Fred Henderson and Ina Wallace—was also at work on a book on otitis media in young children, to be published within a couple of years, which would again further FPG's reputation for medical research.

Among FPG's many other ongoing projects in 1995 was its participation in two more major, multi-year and multi-site research initiatives. The first was a 10-site project that the National Institute of Child Health and Human Development was sponsoring: The Study of Early Child Care and Youth Development. FPG's Martha Cox, principal investigator for the North Carolina site, and Peg Burchinal, co-principal investigator for the study's data center and lead statistician, studied child care experiences and parenting as predictors of children's social and cognitive development. The study recruited over 1350 families when their babies were born and followed the children (and their families) through high school.

The findings would generate broad media coverage. According to one of the summary reports from the NICHD, the study determined that children in higher quality non-maternal child care "had somewhat better language and cognitive development during the first 4½ years of life," and "they were also somewhat more cooperative than those who experienced lower quality care during the first 3 years of life." Higher quality child care experiences continued to predict higher academic and social skills through high school; overall, however, parent and family characteristics "were more strongly linked to child development than were child care features." For example, "children showed more cognitive, language, and social competence and more harmonious relationships with parents when parents were more educated, had higher incomes, and provided home environments that were emotionally supportive and cognitively enriched, and when mothers experienced little psychological distress." Burchinal would author and co-author numerous publications associated with the study—as recent as 2014's publication on long-term findings showing that in adolescence parenting moderated some effects of child care.

Mary Ruth Coleman (here) and Jim Gallagher were in the early years of a project that led to a change in state law on identifying and serving gifted students.

The National Institute of Child Health and Human Development's Study of Early Child Care and Youth Development looked at child care experiences and parenting as predictors of children's social and cognitive development.

Meanwhile, another major research initiative was underway in 1995, too, which involved a multifaceted, three-state qualitative and quantitative exploration of young children with disabilities, their fam-

ilies, and the services they received—and policy implications were an integral component of the project.

How States Responded to the Individuals with Disabilities Education Act

In 1990, Congress had reauthorized, amended, and retitled the Education for All Handicapped Children Act as the Individuals with Disabilities Education Act (IDEA), intending to mandate the same opportunities for education for children with and without disabilities. By the middle of the decade, FPG's Gloria Harbin had formed the Early Childhood Research Institute on Service Utilization to explore how well nine communities in three states had incorporated federal law and policy into practice.

"In examining the implementation of this law, we realized just how monumental the legislation was. It is very far reaching," Harbin said at the time. "People have made progress in implementing this law, but there has been more progress in some areas than in others."

Gloria Harbin

For her project, Harbin had gathered a wide array of established expertise, such as former FPG director Jim Gallagher, as well as future FPG stalwarts, including Sharon Ringwalt, who would become an important figure in technical assistance at FPG, Robin Rooney, who would later direct the North Carolina Early Learning Network, and statistician John Sideris, who would continue to crunch numbers for numerous FPG projects over the next two decades.

She also brought in Robin McWilliam, who developed in-depth case studies of families for the project. At the time, McWilliam was in the middle of a 14-year tenure at FPG, and, among other areas, his research focused on the engagement and inclusion of young children with disabilities. "Specialized services need to be provided in classrooms, in collaboration with the classroom staff, so the staff can carry out the interventions throughout the day," McWilliam would explain in 2002. "All the worthwhile intervention occurs between specialists' visits. Integrated therapy and integrated special education are more effective than pulling children out for these services."

But was this happening on the ground in the 1990s? Harbin's team found that when program leaders understood recommended practices, services often reflected the practices—with the exception of therapies, which Harbin's project determined to consist often of a clinical and specialized approach rather than an integrated approach. In fact, both families and providers in the field believed pull-out therapy was superior to an inclusive model.

Her team also found that early intervention services were reaching more children, and communities had put in place a comprehensive array of resources to meet the diverse needs of children and families—yet most services focused only on children, which is what families expected; in general, families believed service providers were supportive and responsive to their child's needs. In addition, Harbin's team also found that most early intervention programs did not have a means of recording expenditures that would allow calculating the cost of services.

"The most positive outcomes occurred when there were certain factors that existed in the system, the service providers, the families, and in the relationship between the service providers and the families," Harbin explained. "You couldn't just say everything will be OK if you just have three specific things in the service system. It had to be the whole package."

"The most positive outcomes occurred when there were certain factors that existed in the system, the service providers, the families, and in the relationship between the service providers and the families."

Harbin's project also found evidence that supported an underlying supposition inherent in IDEA. "The more comprehensive and coordinated the service system is, the better the outcomes for children and their families," she said at the time. But up until her project, no data had been available to support that assumption.

A Heightened Focus on Families

During the second half of the 1990s, FPG continued with its long-established interest—first amplified during Gallagher's CIREEH—in families with children with disabilities. North Carolina Governor Jim Hunt had helped FPG commemorate its 30th anniversary, and FPG had held a ribbon-cutting ceremony when new ramps and a new entrance made the child care center easily accessible for everyone. Gloria Harbin's team was exploring family experiences in tremendous depth through Robin McWilliam's case studies and through other lenses. McWilliam also headed FPG's School Practices Project, which studied 300 special educators, teachers, and therapists in 93 North Carolina elementary schools and created checklists to foster better individualized and family-centered practices. FPG's Fragile X team had a strong interest in families, and Debra Skinner, a Fragile X researcher, also was investigating how Latino families adapted to life with a child with intellectual disabilities. In addition, Rune Simeonsson and Donna Scandlin were taking lead roles in establishing FPG's Office on Disability and Health.

Simeonsson, meanwhile, was collaborating on a new five-year longitudinal study. Funded by the Office of Special Education Programs, the National Early Intervention Longitudinal Study brought Bailey and Simeonsson together with McWilliam, Lynne Kahn, and

Robin McWilliam

Anita Scarborough to explore children and families receiving early intervention, document its outcomes, and determine if child and family characteristics were impacting services. The study followed over 3,300 children in 20 states, and before the decade drew to a close, initial data from an even larger first sample of children found 59% qualified for services because of documented developmental delays—with "speech/communication impairment" reported most commonly.

In addition, Virginia Buysse—who with Barbara Goldman had conducted one of the first studies of inclusion at FPG's child care center—and Partnerships for Inclusion's Pat Wesley were initiating the Parent Leadership Project to train parents of children with disabilities to develop leadership and advocacy skills.

"Comprehensive, high-quality, individualized early care and intervention for children with disabilities now requires simultaneous attention to child development, community building, professional development, and family involvement," said Buysse at the time. "Families should be considered essential advisors in public policy, research, personnel preparation, and program development, as well as partners in all aspects of their children's care and education."

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Bailey termed families "complex and interactive entities," and FPG's ongoing work on multiple fronts, backed by numerous types of expertise, was essential in addressing the strengths and needs of families and children with and without disabilities. In the late 1990s, Pam Winton was directing a Smart Start funded program to engage families; Martha Cox was studying mothers and how marital disputes influenced their interactions with babies; and Cox and Jeanne Brooks-Gunn also edited a book on families. In the following years, FPG's focus on families would continue to permeate numerous projects.

A New Millennium and Pre-K Takes the Spotlight

Already by 2000 the Bailey era was booming. With help from Dick Clifford and Thelma Harms, Jonathan Kotch had opened a 3-year training program for early child care and education professionals that focused on health and safety at child care centers. Steve Reznick and Barbara Goldman—a research partnership that continues to this day—were studying early memory development in infants under age one. Fragile X and otitis media researcher Joanne Roberts had begun a cross-cultural study with Susan Zeisel that looked at African American children's language skills and their impact on early school success. Mary Ruth Coleman had launched her Using Science, Talents, and Abilities to Recognize Students project, which helped teachers nurture the talents of children from low-income and culturally diverse homes, and she was only a year away from beginning a new national project

that would support general education teachers in meeting the needs of middle school students with disabilities. And, on very short notice, Donna Bryant, future FPG associate director Kelly Maxwell, and future FPG assistant director Stephanie Ridley began conducting a study of over 1000 North Carolina kindergartners, determining the new students' school readiness—and laying the foundation for the state's pre-kindergarten program.

Another major center at FPG was shifting its focus to take an in-depth look at the nation's Pre-K classrooms. The U.S. Department of Education had come in with a significant award for FPG for the National Center for Early Development and Learning, which brought collaborating partners at the University of Virginia and UCLA. The center already was flourishing in 2000, and by the time it closed its doors, it would have a reputation as an impressive nine-year hub of research, providing national leadership and producing dozens of studies designed to improve practices in the education and care of young children. In addition to Bailey, joining project directors Dick Clifford and Donna Bryant over the years were other key FPG experts, including Pam Winton (who, during the project, became FPG's first director of outreach) and Peg Burchinal (who directed statistical analyses for the project), as well as Diane Early, Oscar Barbarin, Giselle Crawford, and Lynette Aytch.

The national center was a collection of studies, including—in keeping with FPG tradition—seminal work on teacher education programs, which directly and indirectly later would inform technical assistance that focused on gaps in curricula. After 2000, when the center turned its primary focus to a multi-state study of pre-kindergarten programs, researchers used the newly revised ECERS and other

measures to look at a number of aspects of pre-kindergarten learning experiences across a highly variable range of approaches and settings.

Promoting high-quality learning and development can reduce the achievement gap between children from middle and low-income homes—a vast difference in children's skills when they enter school, which often continues to broaden and is difficult to reverse. The documented effectiveness of small-scale programs—including the Abecedarian Project—in generating positive outcomes for at-risk children, helped to prompt the creation of larger programs serving greater numbers of children. By 2000, several states and school districts had implemented Pre-K programs, and questions arose about their short-term and long-term impacts.

Findings from the National Center for Early Development and Learning were mixed. Class sizes and teacher-child ratios in pre-kindergarten classes met or exceeded the recommended standards, and the teachers were on balance better educated and better paid than other early childhood educators. Yet, classroom quality was lower than researchers expected. A growing body of evidence at the time was demonstrating that early learning was most likely to happen when children were engaging in responsive, elaborated interactions with adults, but researchers instead found children in Pre-K experiencing large amounts of time with little or no adult contact.

The documented effectiveness of small-scale programs—including the Abecedarian Project—helped to prompt the creation of larger programs serving greater numbers of children.

Although Pre-K did heighten school-related social and academic skills by the time children entered kindergarten, classroom quality and practices were not benefitting children as much as they could have. Carollee Howes, a researcher and principal investigator for the center's UCLA site, noted the yet unfulfilled potential of Pre-K in the young new millennium: "Imagine what we could do if all programs were of high quality."

FPG and Quality Pre-K

After the turn of the new millennium, the state of North Carolina awarded Ellen Peisner-Feinberg more than a dozen (and counting) consecutive annual contracts for FPG's evaluation of the state's pre-kindergarten program. Her team's findings and recommendations would help the program maintain its quality as it expanded, coalescing legislative and public support for it.

The results from the FPG team's statewide school readiness study in 2000 had revealed North Carolina's achievement gap, and the state accordingly designed their Pre-K program to serve young children at risk and prepare them for success in school. The full school-day, full school-year program's guidelines provide high-quality standards related to staff qualifications, class size, teacher-child ratios, child care licensing levels, curriculum, and provision of program services. Its students include children with limited English proficiency, those

With ongoing annual feedback from FPG's evaluation team, the North Carolina program would become one of the nation's top examples of the potential power of Pre-K.

living in low-income households, and children with chronic health conditions and developmental delays. When the program began in 2001, it enrolled 1,200 children annually, and within a dozen years it would serve 30,000 children in 2,000 classrooms each year.

Peisner-Feinberg, who also served with Janis Kupersmidt on Donna Bryant's new five-year Head Start Quality Research Center, found that as North Carolina's Pre-K program grew it maintained several strong components that were integral in sustaining quality. FPG's evaluation team also determined that children in the program made substantial gains in language and literacy, math, general knowledge, and social skills. In time, the team also would find that enrollees in the state's Pre-K continued to make gains as kindergartners—and reading and math assessments at the end of third grade would later reveal that children from low-income families who had attended Pre-K had higher scores than similar children who had not attended.

Over the years, with ongoing annual feedback from FPG's evaluation team, North Carolina's program would become an important example of the potential power of Pre-K.

The Family Life Project

According to FPG fellow Lynne Vernon-Feagans, roughly 20% of children in the United States live in rural communities, but surprisingly little research had looked at poor children from these areas.

"We're examining a very understudied group of children in rural areas, and the study is sizeable," said Vernon-Feagans. Since 2003, the Family Life Project (FLP) has followed 1,292 children from birth. In collaboration with Mark Greenberg at Penn State University and with researchers at UNC and several other universities and institutes—including key FPG figures Martha Cox, Mike Willoughby, Peg Burchinal, Kirsten Kainz, and others—Vernon-Feagans and her colleagues have published numerous studies that have revealed what it means to be a child in rural America.

Lynne Vernon-Feagans

By the time the Family Life Project began, Vernon-Feagans already was a longtime veteran of numerous FPG studies, dating back to the late 1970s and early

1980s. She had collaborated on a longitudinal study with Don McKinney of how children with learning disabilities developed in public school settings, and she had worked with Dale Farran on a study of early language development. She also had teamed with Barbara Goldman, Nancy Johnson Martin, and Jean Gowen on the Parent-Child Reciprocity Project, which studied mother-infant interaction and videotaped infants with disabilities. The team then showed parents children's responses to sounds, lights, and other learning situations as evidence of infants' potential.

With data from living rooms to schools, the Family Life Project would focus on a representative sample of children, taking a broad look at the impacts of parenting, poverty, early child care experiences, classroom quality, and other variables on a wide variety of child outcomes. Key findings would show how important it is for parents and teachers to engage in complex and detailed interactions with their young children, how fathers make key contributions to child development, and many other insights. The project would produce dozens of integral, peer-reviewed articles and a monograph for the Society for Research in Child Development, which includes a seminal exploration of how parenting suffers from "cumulative risk"—a combined measure of maternal education, income, work hours per week, job prestige, household density, neighborhood safety, and the extent to which the parents are consistently partnered.

With data from living rooms to schools, the Family Life Project would take a broad look at the impacts of parenting, poverty, early child care experiences, classroom quality, and other variables on a wide variety of child outcomes.

For their study of cumulative risk, FLP researchers observed parenting in the home by looking at whether parents were sensitive and supportive or harsh and controlling, and they observed the amount each mother talked to her child during a wordless picture book task, as well as recording the material investments that parents made in their child's development. By examining important outcomes for children as early as age 3, Vernon-Feagans and her colleagues determined that cumulative risk, largely due to its effect on parenting, was an important predictor of these children's outcomes. In short, parenting deteriorates when families face a number of risk factors at once, and, as a result, children's intellectual, emotional, and social development suffers.

"Overall, our findings indicated that the environment of poverty begins to shape child development very early in ways that have important implications for the child's ability to regulate emotion, attention, and behavior, as well as to use language in ways that school demands," said Vernon-Feagans when the monograph was published.

Later, in looking back over the project's first decade of research, Vernon-Feagans said one thing in particular stood as a testament to the families she and her colleagues have studied. "It's quite amazing that young children even from poor families in rural communities are on target when they start school," she said. "This may be because of a variety of protective factors—such as less exposure to violent crime

than in urban areas. More contact with extended families and churches may also bring these children a better sense of community."

According to Vernon-Feagans and her current project director, Patricia Garrett-Peters, understanding the relationship between children's literacy and later achievement is especially important in rural communities. As these children grow older they typically have fewer good educational and employment opportunities than children in other areas. What happens immediately after elementary school can be crucial for what happens later. "Grade school is a critical period for setting the stage for children's future academic success," she said.

Today, the Family Life Project is studying children as they progress from fifth through seventh grade for clues about why those students might have less access to later opportunities.

"Which parenting practices—and which instructional practices—are most important to building literacy for rural children?" she asked. "Does good instruction at elementary and middle school help our most vulnerable children achieve their potential even in the face of many home challenges? These are important questions."

Filling the Data Gap

Only a couple of years before Don Bailey's term as director would end, some experts believed that federal funding for young children in programs created under the Individuals with Disabilities Act (IDEA) was vulnerable due to little available hard data demonstrating these programs' effectiveness. At the same time, declining tax revenues were bringing individual state programs under increased scrutiny. With several partners, including primary contractor SRI International, FPG launched the Early Childhood Outcomes Center to accumulate data showing if and how IDEA-mandated programs were benefitting young children.

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It would be a massive, three-pronged undertaking, involving collaboration with stakeholders about outcomes measurement, research on the development and use of outcomes measures, and technical assistance to support states in developing and implementing the measurement. FPG would coordinate technical assistance and collaboration, with Lynne Kahn bringing her extensive experience as then-associate director of FPG's National Early Childhood Technical Assistance Center to direct the ECO Center's technical assistance activities. FPG would work with states on evaluation design, data collection training and supervision, as well as on analyzing and utilizing data.

"Working with the ECO Center has provided a focus and depth of research and information that is allowing the early childhood community to really consider the options for how to assess the effectiveness of our programs," said Ruth Littlefield, director of the Preschool Program in the Division of Special Education in the New Hampshire

Department of Education, early in her program's partnership with ECO. "It is raising the bar in terms of the questions we ask and the answers we can come up with to assess our programs."

Duncan Munn, then head of the Early Intervention Program in the North Carolina Department of Health and Human Services, said the ECO Center provided an important new opportunity for his program.

"The center provides a great chance for us to take a long-term look at the impact of early intervention services, particularly of outcomes involving children's developmental growth—their social, emotional, and language skills," said Munn. "We've looked at family outcomes, systems outcomes, and various quantitative factors, but we've never had the resources to do a systematic, large-scale child outcomes study."

A decade later, technical assistance experts still would be singling out Kahn's ECO Center for praise. The Center for IDEA Early Childhood Data Systems was developing its new framework for an effective statewide data system for early intervention and preschool special education. Martha Diefendorf, co-lead of DaSy TA Planning and Coordination, said FPG's rich history of technical assistance successes made her optimistic when she recalled the challenges the ECO Center once had surmounted.

"Ten years ago, we faced a similar challenge with helping states report on child and family outcomes," she said, "but thanks to the Early Childhood Outcomes Center, every state today can report on major outcomes."

FirstSchool

Sharon Ritchie

FPG researchers had long discussed the "FirstSchool" concept but lacked the money to make it happen. Findings from the National Center for Early Development and Learning's study of Pre-K and from other research pointed to the need to rethink school entry. Finally, in 2005—with backing from the W.K. Kellogg Foundation—Dick Clifford, Kelly Maxwell, and Sharon Ritchie launched "FirstSchool."

They entered an intensive three-year planning process to develop an ambitious new model for the seamless education of children 3 to 8 years old. "Most new efforts do not have that much time to plan," said Ritchie, who directed the project as it moved into the field. "The challenges in providing high-quality education and care to an increasingly diverse group of children ages 3 to 8 are great—and they deserve careful consideration."

The planning process brought together teachers, administrators, higher education faculty, researchers, community leaders, and parents around organizing principles. *Schools should offer each child the opportunity to succeed. Schools also should invest resources to support systemic change. Positive and reciprocal relationships are essential to schooling. Strengthening equity is paramount. The best practices arising out of early education, special education, and elementary education should inform school practices.*

From these principles, stakeholders in concert developed a research-based concept of schooling that also was responsive to community values and needs, as well as to educators' experiences. By this time, a fourth of all 4-year-olds in the United States were enrolled in a public school program, and, once a plan emerged, the FPG project prepared to collaborate with partner schools in three states.

FirstSchool would work with administrators and teachers to capture a portrait—a lay of the land that would include a school-level self-assessment. Then, the process of creating a detailed action plan could begin.

Sam Oertwig, co-principal investigator—along with Adam Holland, Gisele Crawford, Laura Gutman, Christine Harradine, Toniann Glatz, Barbara Lowery, Nitasha Clark, Rebecca New, and others—would serve with Ritchie over the next several years. Thanks in large part to increased support from W.K. Kellogg Foundation, the FirstSchool team would work with administrators and teachers to capture a portrait—a lay of the land that would include a school-level self-assessment. Then, with the full picture of

each school, the process of creating its detailed action plan could begin. Throughout it all, FirstSchool would provide each of its partner schools with funding, ongoing assessments, professional development, and two full-time facilitators.

"There's a new educational fad every day, and schools and teachers are tired of it," Ritchie explained, as her team moved from planning to implementation. "That's one of the reasons that FirstSchool is about changing the system, not enforcing a prescribed curriculum."

The 21st-Century Melting Pot

Not surprisingly, FirstSchool's focus on every child and on strengthening equity in education was not unique for FPG projects. Over 28 million foreign-born people were living in the United States before FirstSchool had entered even its earliest planning stages. Over half were Latino, and 2.4 million children had difficulty speaking English. In fact, 45% of all children under age 5 were from ethnically or linguistically diverse backgrounds. Understanding the needs and strengths of children and families from populations from around the world had never been more important—nor had supporting the people and programs that served them.

Debra Skinner already had studied how Latino families adapted to life with a child with intellectual disabilities, and now Pam Winton and

Camille Catlett were continuing their work in personnel preparation and professional development with the Walking the Walk project, which developed strategies to increase the diversity and cultural competence of future practitioners who worked with children. With campus and community partners, the project brought together families, people with disabilities, students, administrators, and faculty members across disciplines at community colleges and universities, including historically black colleges and universities. Results included more course offerings in Spanish, changes to instructional materials, and a heightened focus on campuses and in classrooms on the importance of culture and language.

Camille Catlett also directed the Crosswalks project, which studied how to help programs at colleges and universities systematically address diversity through coursework, field experiences, and program practices. For programs in North Carolina preparing students to work with children birth to 5, with and without disabilities, the FPG project provided training, technical assistance, and resources to support changes in teaching that would respond to and reflect diversity.

Meanwhile, Betsy Ayankoya, who later would become associate director of the Early Childhood Technical Assistance Center, and Dina Castro were directing New Voices/Nuevas Voces. The project focused on Latino children with disabilities and on their families by providing support and technical assistance to the providers serving them.

Because dual-language learners represented a large and growing group of children in the United States, as the decade unfolded FPG

would devote considerable resources to understanding and serving children from families comprising the country's 21st-century melting pot. In 2005, Barbara Wasik and Joe Sparling's Partners for Literacy entered its second year, developing and implementing a literacy curriculum based on materials that arose from the Abecedarian Project and Project CARE.

"We saw an opportunity to expand our work by making it appropriate for family literacy programs," explained Wasik at the time. "We have created a set of strategies that can be used by both parents and teachers to engage in instructional conversations with children when reading with them."

Partners for Literacy eschewed faddish curricula for research-backed instruction. It was comprised of several components, including an updated version of the Abecedarian Project's *LearningGames*, as well as its classroom version, *LiteracyGames*. The project also included a very strong interactive book-reading element, and it used a strategy of enriched caregiving, which embedded opportunities to promote children's language and literacy into everyday parenting and teaching. Over 250 teachers, administrators, parent educators, and home visitors capitalized on the curriculum at 45 sites.

Nimble projects were adapting to a rapid shift in demographics at a time when FPG—having grown from a center to an institute—was entering an era of new possibilities.

"We have many home languages represented by our families, including Hmong, Creole, Somali, Cantonese, and Russian," said Wasik in 2005. "Over half our families are Spanish speaking. As a result, we have provided increased training to help staff implement the curriculum with English Language Learners, and we have translated numerous materials into Spanish."

Partners for Literacy and other nimble projects were adapting to a rapid shift in demographics at a time when FPG—having grown from a center to an institute—was entering an era of new possibilities.

The Era of Global Possibilities

new science, new strategies, new missions

Sam Odom at FPG's child care center

Samuel L. Odom

While FPG searched for a new director after Bailey's departure, Donna Bryant kept the ship on course for several months as interim director of FPG—simply another of the many ways she had exhibited leadership over the years. In addition to her guidance and a distinguished record of research, her ongoing legacy at FPG also includes a family tie to the story of FPG's creation. Forty years earlier, her father-in-law, Representative Donald Stanford of Chapel Hill, had introduced the bill to North Carolina's state legislature authorizing FPG.

Bryant was able to return to her projects fulltime when, in August of 2006, it became official: Sam Odom was returning to FPG from Indiana University, this time to be director. Much earlier, like Bailey, Odom had taken classes from FPG co-founder Hal Robinson; Nancy Robinson also had served on Odom's dissertation committee. From 1996-1998, Odom had been UNC's William C. Friday Distinguished Professor of Child Development and Family Studies in the School of Education and had led efforts to establish the university's Ph.D. program in early childhood, families, and literacy. To support students in the program, he and Bailey had secured a leadership training grant. During this time, Odom also had conducted research in FPG's child care center, and, after leaving, he had maintained his ties with FPG, including collaboration on a recent project with Virginia Buysse that had explored inclusive preschool programs in Indiana and North Carolina. He took the director's chair backed by national respect for his record of work with young children, peer social relationships, autism spectrum disorder, and school readiness.

"The big draw was FPG itself. It is unique in its research contributions to the field, its translation of research to practice, and the outreach and technical assistance it provides."

—Samuel L. Odom

Projects on behalf of children with disabilities, particularly children with autism spectrum disorder, would become one of Odom's signature contributions to FPG.

Among the formative experiences in Odom's career was the early opportunity to work at a ski resort after finishing his undergraduate study. "There was a program there that taught people with disabilities to ski," he said. "There was a man about my age who was blind from an injury from the Vietnam War. I got to know him well. Watching his determination and ability to overcome his disability was the final push to pursue special education as a career."

Over the years, Odom has authored or co-authored over 100 publications, and he edited or co-edited 10 books on early childhood intervention and developmental disabilities. He often explored topics related to early childhood inclusion and preschool readiness, before focusing on autism spectrum disorder, the epicenter of his later projects.

Odom's awards include honors for his teaching, service, and research, and Congressional committees twice have called upon him for expert testimony. But it was his term on the National Academy of Sciences Committee on Educational Programs for Children with Autism that led him to turn his attention primarily to autism. In an interview shortly after he returned, he said that in addition to continuing to address the needs of young children and focusing on prevention issues, FPG would remain steadfastly committed to research and outreach on behalf of children with disabilities. His projects on behalf of children with disabilities, particularly children with autism spectrum disorder, would become one of his signature contributions to FPG.

Autism Spectrum Disorder (ASD)

Leo Kanner at Johns Hopkins University and Hans Asperger from Austria had indentified autism at about the same time in the 1940s, and FPG had been working on behalf of children with autism spectrum disorder since the early days of TADS. Marie Bristol and Jim Gallagher later worked with families of children with autism, and later still, near the end of the 1990s, research from Frank Symons focused on self-injurious behaviors in children with autism. Never before, though, had FPG developed such a comprehensive array of initiatives to help enhance the lives of children and youth with autism as the institute would after Sam Odom became director in 2006. Toddlers to high school students would benefit from FPG's research, programs, and resources, which impacted families, providers, educators, school administrators, and policymakers. Along with TEACCH, the Carolina Institute for Developmental Disabilities, and other contributors, FPG's work would help make UNC the world's top-ranked public university for research on autism.

Part of the reason for the boom was heightened awareness of autism's prevalence and an accompanying new urgency. A couple of years after Odom became director, new data from the U.S. Centers for Disease Control revealed an average of 1 in 110 children had autism—a spectrum of disorders characterized by social-communication characteristics and repetitive behavior. These children incur an average additional cost of more than $2 million for treatment and care over a lifetime, but early diagnosis and effective interventions can reduce that cost by two-thirds. The rise in numbers of children diagnosed with ASD meant that most teachers, early care professionals, and other practitioners would at some point work with students on the spectrum—and that in turn meant they were going to need to know how to do so. FPG's work would include investigating ASD's characteristics and underlying mechanisms, studying interventions that enhanced the lives of children with autism and their families, and exploring professional development that promoted the use of effective practices with people with ASD.

"The research on the most effective behavioral and social interventions for these children is accelerating—and so are our understandings of how best to translate and implement these approaches in homes, schools, and communities."

In the decade after Odom arrived, autism experts at FPG would collaborate internally and externally with a network of colleagues on a wide variety of small and large-scale initiatives. In addition to Odom, crucial contributions on the work have come from Harriet Able, Brian Boyd, Peg Burchinal, Ann Cox, Kate Gallagher, Peter Gordon, Kara Hume, Suzanne Kucharczyk, Martha Lee, Gary Martin, Josh Plavnick, Steven Reznick, Ann Sam, Evelyn Shaw, Jessica Dykstra Steinbrenner, and Connie Wong, with Yi Pan, John Sideris, and Elizabeth Gunn providing statistical analyses and data management expertise.

Because the symptoms of autism can emerge before age 3, FPG's autism experts have provided free online instruction on the early identification of ASD. They also determined the reliability and validity of screening and diagnostic measures for preschool-aged children that included an assessment of the severity of ASD symptoms. In another study, they examined the genetics behind the relationship between Fragile X Syndrome and ASD. In addition, they published a seminal study comparing two well-established instructional models for children with ASD, which drew recognition as one of the field's top 20 scientific advances. They also evaluated parent-mediated interventions for toddlers, and they later determined that child characteristics and maternal education affect the frequency of specific activities of children with autism. To assess the quality of programs for students on the autism spectrum in preschool, elementary, middle, and high school settings, they developed the Autism Program Environment Rating Scale—and then they provided training on how to use it.

To support learning for older children, they adapted a preschool intervention on social communication for elementary school, and they developed a pioneering curriculum for teachers to help them meet students' needs and appreciate their strengths. They examined

the effects of peer social networks on social interactions, frequency of victimization, and friendship development for high school students with high functioning autism or Asperger's Syndrome. Based on voices from key stakeholders, they created an action plan for high schools to promote optimal outcomes for students with ASD. They also collaborated on a multimedia manual that offers strategies for secondary school teachers whose classrooms increasingly contained students with autism. They created case studies on visual supports, self-management, and prompting to support the learning of service providers working with high school students with autism. They spearheaded a special issue in a peer-reviewed journal on surmounting the challenges of autism in high school and released an accompanying lay-friendly series of research briefs. Working with professionals from the Center for Autism Research in Riyadh, they even helped to establish and promote high quality programs and evidence-based practices in Saudi Arabia for learners with ASD and their families.

Much of FPG's work on autism has been organized around two large, multi-site centers that Odom heads. The first, the National Professional Development Center on Autism Spectrum Disorders (NPDC), released a much-anticipated update on evidence-based practices for children and youth with autism. FPG scientists spearheaded the project, screening 29,000 articles about ASD to locate the soundest research on interventions for children from birth to age 22.

"Some interventions may seem cutting-edge, but we don't yet know if they have any drawbacks or trade-offs," said FPG investigator Connie Wong, who co-headed the review of research with Odom. "Our report only includes what's tried and true."

Not only did the NPDC's report provide guidance for professionals, it also was an essential tool for families. "Parents often pay for interventions that have no evidence behind them, but this report will allow them to make the best choices," said Odom. This would become a theme of Odom's public presentations, particularly when Irish media would take an interest in his visit to Dublin for a research conference of Ireland's National Council for Special Education. He would explain the challenges facing parents with children with ASD, such as "snake-oil salesmen" who hawked unproven treatments, and he would emphasize that evidence-based practices can markedly improve children's lives. Odom also would appear on a widely-viewed national webcast on autism spectrum disorder, which the Centers for Disease Control produced.

Meanwhile, the Center on Secondary Education for Students with Autism Spectrum Disorder (CSESA), an innovative program from FPG and six partner universities, was preparing students with autism

for life after high school. "Public high schools may be one of the last best hopes for adolescents with autism—and for their families," Odom explained. "Many of these students will face unemployment and few social ties after school ends."

While teachers and other professionals in the schools work hard to achieve beneficial results for students with ASD, positive outcomes remain elusive. In several high schools, CSESA began focusing on understanding emotions, developing friendships, and social problem-solving. Early results at a high school in North Carolina showed that student groups designed to bring together adolescents with and without ASD have helped them engage with one another more often.

"Even a simple hallway 'hello' between students with autism and their peers is more likely now," said Kara Hume, CSESA's project director and co-principal investigator. In addition to addressing literacy skills, Hume added, another cornerstone of the program is its ongoing emphasis on promoting responsibility, independence, and self-management. "We help develop basic high school survival skills," Hume said.

In 2013, the Theodor Hellbrugge Foundation awarded Sam Odom the *Arnold Lucius Gesell Prize* for an outstanding career in the field of child development. "It's an exciting time to focus on children with ASD," said Odom on the occasion of the award. "The research on the most effective behavioral and social interventions for these children is accelerating—and so are our understandings of how best to translate and implement these approaches in homes, schools, and communities."

Tragedy, Transition, and the Trohanis TA Projects

Pascal "Pat" Trohanis, director of the National Early Childhood Technical Assistance Center, was no stranger to transitions. He had been an integral force in the evolution of TADS, in the 1987 metamorphosis of FPG's technical assistance into the National Early Childhood Technical Assistance System (NECTAS) and then into its latest incarnation, before Odom's arrival, as the National Early Childhood Technical Assistance Center (NECTAC). Whereas NECTAS provided support to the states in early childhood services, NECTAC's charge was to support the implementation of early childhood provisions of the Individuals with Disabilities Education Act (IDEA).

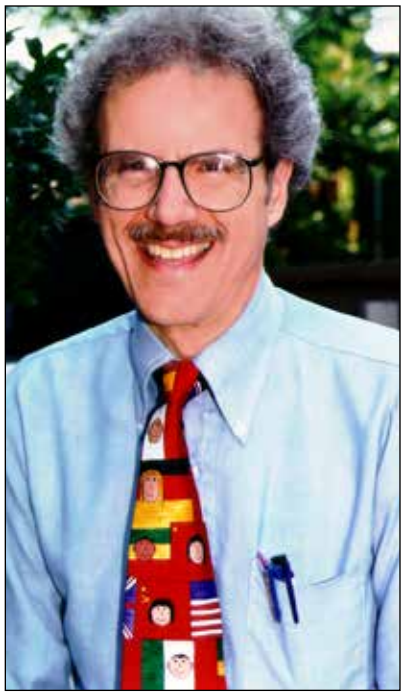
"We believe the new TA Center will carry on and build upon the tradition, commitment, and foundation of the NECTAS project," Trohanis had said at the time. "Our new contract demands a more focused approach to TA—one that seeks to influence early childhood service systems in a way that leads to more positive outcomes for young children and their families."

Although states had made progress since the passage of IDEA, challenges remained in assuring that eligible children and families received individualized, high-quality services. Trohanis believed in an approach that facilitated system-level change on multiple tiers. NECTAC targeted state infrastructure, personnel development, community infrastructure, service providers and practices, and individual children and families. When Odom arrived, NECTAC already had

become a trusted national resource for states on implementing the early childhood provisions of IDEA and was impacting the lives of a million children with disabilities. Not surprisingly, the U.S. Office of Special Education Programs awarded Trohanis's center a new five-year grant.

"NECTAC is emblematic of FPG's 40-year history of helping the nation expand, strengthen, and improve services to children with disabilities and their families," Trohanis said in 2007. "This grant allows us to continue to work with states to tackle tough societal service problems for young children so that they can participate fully in community life with dignity and respect."

Trohanis and his NECTAC team were collaborating with states and other partners on quality assurance procedures, coordination of funding sources to remove income level as a barrier to children receiving services, recruitment of high-quality personnel, the early identification of eligible children, bringing families into the fold, promoting inclusion, and developing effective practices that would address each child's unique needs. Trohanis and NECTAC were powering substantial change that benefited a very large group of children. He also had been battling cancer for a very long time.



Pascal "Pat" Trohanis

On June 23, 2007, Pat Trohanis, senior scientist at FPG, director of NECTAC, and a true TA pioneer since his arrival in 1972, died at age 64.

"FPG has lost one of its important early leaders with the passing of Pat Trohanis," said former director Jim Gallagher. "To many people in special education, he was the face of FPG as he carried our message across the country and around the world. We will remember Pat with a smile and with great gratitude for what he has accomplished for all of us and for the children with special needs to whom he gave so many years."

Pat Trohanis was irreplaceable, and a decade after his death no one who worked with him at FPG has forgotten him. "Pat's love of all kinds of people in all kinds of places was a constant thread in his life, as was his commitment to providing the best opportunities to young children," FPG colleague Joan Danaher later wrote in the introduction to a special issue of *Topics in Early Childhood Special Education* in his tribute. "Pat's career evolved as our field evolved."

The Trohanis legacy lives on in many ways at FPG, embodied especially in that cluster of projects that now bears his name, perpetuating his devotion to young children with disabilities.

Danaher, who herself now has over three decades of experience on national TA efforts at FPG, also wrote about how for over 30 years Trohanis had become a trusted ally for the state coordinators of programs that operated on behalf of young children with disabilities. "He understood their challenges, as well as the importance of their mission. He knew that it was through these dedicated state agency personnel that children and families would benefit. He unceasingly inspired them with humor, grace, and a quest for quality."

The absence of such leadership and experience would have left an unfillable vacuum for other groups, but FPG had put technical assistance on the map with a full stable of experts. Danaher, now an associate director of NECTAC's subsequent incarnation—the Early Childhood Technical Assistance Center (ECTA)—later recalled why Lynne Kahn was the right person to follow Trohanis at the helm of NECTAC, and she credited Kahn for having laid the foundation for much of the ECTA's current work.

"When Pat Trohanis died in 2007, at the urging of her colleagues, Lynne stepped up to lead NECTAC, to prepare us to compete successfully for the ECTA Center, and to grow the Trohanis TA Projects group at FPG," Danaher said. "Lynne possessed the expertise to meet the demands of her new role from her many years of experience in evaluating technical assistance and program outcomes and in designing an approach to TA for state systems improvement."

The Trohanis legacy lives on in many ways at FPG, embodied especially in that cluster of projects that now bears his name, perpetuating his devotion to young children with disabilities.

When *Just Do It!* Doesn't Do It

Not long after Odom became director, in a major coup FPG lured two nationally recognized leaders in implementation science to UNC. The husband-and-wife team of Dean Fixsen and Karen Blase brought with them two national projects that demanded a special kind of expertise. Their new State Implementation and Scaling-Up of Evidence-Based Practices Center (SISEP) soon would help states develop capacity to deliver evidence-based practices that improved academic achievement and behavioral health, while their groundbreaking National Implementation Research Network (NIRN) already was a half-dozen years old.

"It had become clear that implementation was the key to realizing the benefits of evidence-based programs on a socially significant scale."

They had founded NIRN to accelerate growth in the field of implementation science when only a handful of implementation experts existed. With FPG's support, NIRN would flourish, organizing practitioners, program developers, researchers, and policymakers—and people in numerous roles and disciplines would come to better understand the benefits of implementation science. The inaugural issue of *Implementation Science* had defined their discipline as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice," often in typical service and community settings. By the time Fixsen and Blase created NIRN, they already had spent decades learning about evidence-based programs and how to use them with optimal results in many different settings.

"It had become clear that implementation was the key to realizing the benefits of evidence-based programs on a socially significant scale," said Fixsen.

When they came to FPG, implementation science was hot and getting hotter. In a recent edition of *Exceptional Children*, Fixsen and Blase, along with NIRN's other co-directors at the time, Allison Metz and Melissa Van Dyke, identified the main reason for its demand: the powerful inertia to which systems naturally succumb and which can "overwhelm virtually any attempt to use new evidence-based programs." Not surprisingly, a passive "train and hope" approach to implementation rarely succeeds in the meaningful realization of evidence-based practices. Also ineffective: implementation by laws, mandates, or regulations alone; implementation by only providing funding or incentives; implementation without changing supporting roles; and implementation solely based on the diffusion or dissemination of information.

Allison Metz and Dean Fixsen

"Those strategies alone routinely produce only 5–15% success rates," explained Blase. "However, a purposeful investment in implementation can produce significantly greater gains for program recipients."

A *Just Do It!* mantra might sell shoes, but it didn't bridge the research-to-reality gap. Strategic implementation, however, helped to identify and nurture leaders, develop "buy in," and locate or provide supports. In addition, implementation science includes effective processes and mechanisms to anticipate issues and barriers as use of an evidence-based program sends new ripples through organizations and systems.

Over the years, FPG's implementation science projects have included many contributors: Sandra Naoom, Michelle Duda, Barbara Sims, Leah Bartley, Oscar Fleming, Will Aldridge, Jonathan Green, Laura Louison, Cynthia Reid, Kathleen Ryan Jackson, Caryn Ward, and others. According to Fixsen, the small number of experts in implementation science before NIRN's founding has since increased exponentially, and the field is ready for the next leap forward.

He and Blase have retired from NIRN but still devote their expertise to SISEP, which developed a "State Capacity Assessment" (SCA) to measure the progress of the states their project is supporting.

"Two of the five states from our initial group of partners demonstrated significant gains on the SCA," said Fixsen. "And this showed the potential for a state to develop a very competently functioning infrastructure within five years." He added that SISEP's second group of partners were benefiting from lessons learned from the first group as SISEP continually adapts its work.

At NIRN, meanwhile, after Van Dyke left to become an expert implementation advisor for a center in Scotland, Metz would become sole director and establish an expanded research agenda. "Implementation science and field knowledge are growing at a rapid pace," Metz said. "NIRN looks forward to continuing to learn together with our partners around the globe to improve outcomes across the spectrum of human services."

Strategies for Teachers

FPG continued to dedicate attention to developing and understanding classroom strategies and interventions. While Fixsen and Blase were setting up shop at FPG and new autism projects were in planning or already ramping up, Virginia Buysse and Ellen Peisner-Feinberg had participated in a Congressional briefing, during which they discussed the benefits of Recognition and Response (R&R), an early intervention system to identify signs of learning difficulties in Pre-K children. The dynamic R&R approach (based on research from Mary Ruth Coleman, Buysse, and Jennifer Neitzel in a 2006 publication) helped teachers and parents respond to signs of learning difficulty in young children before they ever experienced school failure. Over a five-year grant, Buysse, Peisner-Feinberg, Coleman, and Neitzel, along with Tracey West, Margaret Gillis, Doré LaForett, Peg Burchinal, and others, would continue developing and evaluating the R&R model. Buysse and Peisner-Feinberg later would co-edit *The Handbook of Response to Intervention in Early Childhood*, which included an exploration of Recognition & Response; in all, 13 FPG experts would contribute to the book.

By the time Buysse and Peisner-Feinberg were testifying about R&R to Congress, Coleman's "Using Science, Talents, and Abilities to Recognize Students~Promoting Learning for Under-Represented Students" had become established in 35 school districts and 100 schools, impacting over 21,000 children. Coleman and project co-director Sneha Shah-Coltrane were intent on dismantling stereotypes of children "at-risk," working with teachers in kindergarten to third grade classrooms to help them recognize the potential in their students.

"Nurturing potential early makes it easier to identify strengths later."

"Nurturing potential early makes it easier to identify strengths later," Coleman said. Her project showed teachers how to observe students systematically and use effective strategies that included hands-on, inquiry-based science. Because young children naturally are interested in how things work, the subject matter and approach were an excellent match to engage the age group. Science involves inquiry, exploration, and problem-solving, and Coleman's project helped students demonstrate creativity and persistence, as well as analytical skills. The subject matter also allowed teachers to integrate art, reading, and math into their plans.

"Seeing children though a positive lens fosters a climate of expected academic success," Coleman said at the time. "This climate builds

further opportunities for challenge and accomplishments. When parents and family members are brought into this mix, the child gains the support needed to sustain his or her progress."

Coleman's project continues today in five states and in China and includes Spanish translations of materials for families, as well as the recent publication *U-STARS~PLUS: Science & Nonfiction Connections,* a collection of over thirty lesson plans.

Policy and Evaluation

FPG's core leadership began formulating a new strategic plan that highlighted several focuses for the institute. One of the areas of emphasis emerging from the plan blended FPG's legacies of informing policy with its history of evaluation. FPG's statewide looks at Smart Start and Pre-K in North Carolina, as well as its national exploration of Pre-K through the National Center for Early Development and Learning, demonstrated the power of research to inform and enhance outcomes for young children when program leaders applied conclusions from findings to policies. As FPG was developing its blueprint for the next few years, Peg Burchinal was studying early learning environments for evidence of stronger impacts for children who attended longer periods of time or who attended programs above a quality threshold. In Illinois, Florida, and elsewhere, Noreen Yazejian, Burchinal, Sandy Hong, and Ximena Franco were leading the validation of Quality Ratings and Improvement Systems, which were designed to maintain quality in early learning environments. Burchinal, Iheoma Iruka, and Allison De Marco also examined Head Start's accountability system.

As FPG was formulating its new strategic plan, associate director Kelly Maxwell was continuing a strong collaboration with Georgia's Department of Early Care and Learning, a relationship that also would come to typify the potential power of evaluation research to impact child outcomes. In fact, President Obama later would spotlight Georgia's Pre-K program in his State of the Union Address.

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A few years earlier, early education policymakers in Georgia had wanted to improve quality across the range of early care and education settings. Bright from the Start: Georgia Department of Early Care and Learning (DECAL) approached FPG for an evaluation of Georgia's child care and early education programs.

"We had just developed a comprehensive framework of critical quality components across Pre-K, child care, and family child care," said Bentley Ponder, DECAL's director of research and evaluation. "We needed expertise, though, in determining the best mechanisms for measuring and examining quality statewide."

The 2013 State of the Union Address

FPG agreed to the project, and thus began a collaborative effort that evolved and adapted over the years. The partnership first brought findings about the state's programs that were mixed. Kelly Maxwell led an evaluation team that conducted a statewide study of quality and characteristics of 328 randomly selected sites for licensed child care, Georgia's Pre-K Program, and licensed family child care homes.

Although the team reported some positive findings, it also found room for quality improvement. Global classroom quality in Georgia's Pre-K Program was at the medium level in both centers and schools. In addition, FPG's team reported that the quality of emotional support and classroom organization was generally high, but the quality of instructional support was lower. Outside Georgia's Pre-K Program, the picture was bleaker. Over one-third of the preschool classrooms, two-thirds of infant/toddler classrooms, and three-quarters of the family child care programs fell into the low-quality range.

"The findings underscored the need for improving quality to the state's youngest learners," Ponder said.

Maxwell's evaluation team provided research-based suggestions for raising the quality of the state's programs, and, accordingly, DECAL outlined its plan of attack.

"We appreciate our partnership with Georgia, because we have seen how they use the data to guide their decisions about program and policy improvements," said Maxwell. "The report doesn't just sit on a shelf."

FPG and DECAL—a partnership that continues today—would collaborate on several more evaluations, including an analysis of professional development approaches that the state offered, as well as a look at its summer transition program for rising kindergartners. FPG also began conducting an independent annual statewide evaluation of Georgia's Pre-K Program, examining classroom quality and outcomes for children. When President Obama would single out the program in his 2013 State of the Union Address for its universal access, it came only weeks after a team from FPG, led by Ellen Peisner-Feinberg and with key contributions from Jennifer Schaaf and Doré LaForett, had wrapped up its preliminary report for DECAL.

"Children in Georgia's Pre-K Program exhibited significant growth during their Pre-K year across all domains of learning—language and literacy skills, math skills, general knowledge, and behavioral skills," said Peisner-Feinberg in 2013. "For many areas where we had age-standardized measures, this indicated that they progressed at an even faster rate than would be expected for normal developmental growth."

Peisner-Feinberg also highlighted the importance of Georgia's Pre-K Program to children who were Spanish-speaking dual-language learners. "They made gains in both English and Spanish," she said, "even though the primary language of instruction was English."

FPG's dedication to understanding the experiences of these young learners and their families, as well as the experiences of other children from a wide range of diverse backgrounds, also had emerged from the institute's new strategic planning as a strong area of emphasis—and a new generation of FPG projects focusing on diversity was taking off.

Joanne Roberts

Children of All Backgrounds

Since FPG had opened its doors and then had launched the Abecedarian Project, it had continued a long commitment to understanding and supporting the early learning and care of children from all backgrounds.

In the opening years of the new millennium, African American children and families had remained a central focus of much of FPG's research and outreach, cutting across many projects—with particular projects also making this a primary target of their work. Fragile X and otitis media researcher Joanne Roberts had conducted a longitudinal study with Susan Zeisel and Peg Burchinal that looked at African American children's language skills and their relationship to school success. Roberts and her team followed 73 African American children at school entry and into early adolescence, capturing the impact of vernacular dialect on their literacy, as well as how a number of other variables affected their development.

Since FPG had opened its doors and then had launched the Abecedarian Project, it had continued a long commitment to understanding and supporting the early learning and care of children from all backgrounds.

Tragically, this would be one of her last major projects. Roberts died unexpectedly in 2008, after a prolific career, having authored more than 125 articles for scholarly journals and establishing a new level of rigor for research on speech and communication related to Fragile X, as well as having provided crucial new insights for parents and professionals.

She and her team's research on the development of African American children also had been groundbreaking. Among their many findings, they determined that African American children in kindergarten to third grade had lower levels of academic and social-emotional skills when they had experienced multiple risks in early childhood. The team also found that transition to middle school for African American children was related to lower math scores when they experienced higher levels of social risk, but that the parenting they received and the children's language skills were protective influences.

"What's been really unique about this project is the length of time we've been able to follow these children," Roberts had said, five years into the project. "There are few studies that have followed a large group of African American children from infancy through elementary school."

Meanwhile, Pam Winton and Camille Catlett's Walking the Walk project had forged statewide partnerships to diversify the early childhood workforce. They also had collaborated with colleagues at Duke

University and with area teachers to develop materials to accompany *An Unlikely Friendship*, a documentary about an African American activist and a Ku Klux Klansman who formed a mutual friendship. The collaboration created a 20-page curriculum and video guide for use in middle school through college. If a Klansman and a black activist "could transcend stereotypes and form such a strong and loving bond," the film's producer Diane Bloom said, "so can the rest of us."

When FPG's core leadership reaffirmed the institute's commitment to understanding and supporting children and families of all backgrounds by formalizing a strategic emphasis on diversity, seminal work on multiple fronts was well underway. These projects included Promoting Academic Success for Boys of Color, which the W.K. Kellogg Foundation had funded for five years to unite schools, communities, and families in order to improve the academic and social-emotional outcomes of young boys primarily from African American and Latino families. FPG's Donna-Marie Winn—a specialist in promoting academic excellence and cultural competence in children and youth—led a formidable group of experts that included co-principal investigator Marvin McKinney, a member of FPG's executive leadership board who was a former post-doctoral fellow at the Bush Institute, and Iheoma Iruka, who later would become FPG's associate director. Winn and other key FPG experts also would play key roles in the annual "A Gathering of Leaders" conference, which would grow to unite more than 400 leaders from 25 cities across the country to spearhead forums and initiatives to improve outcomes for boys and men of color.

Iheoma Iruka

Winn, McKinney, and Iruka established FPG's Research, Policy, and Practice Alliance for Supporting Excellence in Black Children with key contributors Christine Harradine, Jenille Morgan, Nakenge Roberts, Mark McDaniel, and Toni Glatz. In 2014, their team reviewed public summits that were part of the White House's Initiative on Educational Excellence for African Americans in a seminal report, finding that the route to early success for African American men required adept navigation of conscious and unconscious racism, as well as capitalizing on available supports.

"Dispelling myths and highlighting true, accurate narratives of Black men and boys can work to remove barriers to academic success and workforce preparedness," explained Winn, who spoke at the summits about promoting educational excellence among African Americans. "There's overwhelming evidence from research and practice that our nation can do a much better job of removing the obstacles that disproportionately undermine the success of young males of color. The only question is, 'Will we?'"

New FPG studies also began looking at how race permeated learning and development of African American children. With Nicole Gardner-Neblett, Winn and Iruka found that parenting affected the academic and social performance of African American boys as they moved from preschool to kindergarten. Gardner-Neblett and Iruka later found that early narrative skills were tied to kindergarten literacy among young African American children in the first study to demonstrate the connection between African American preschoolers' storytelling abilities and the development of their early reading skills. The Family Life Project found that rural mothers' perceptions of racism were a significant predictor of how they interacted with their young children during a picture-book session. Kirsten Kainz and Yi Pan determined that African American students in first grade experienced smaller gains in reading when they attend segregated schools—but that the students' backgrounds likely were not the cause of the differences. In addition, Kate Gallagher's research revealed that in kindergarten and first grade, teachers' relationships with African American boys worsened during the course of the school year, regardless of the teacher's race. Winn, Harradine, and Mary Ruth Coleman also authored *Expanding Excellence*, which highlighted the importance of family engagement and other key factors impacting children of color. And, on the eve of FPG's 50TH anniversary, Iruka and an editorial cadre of current and former FPG experts also spearheaded a new *Social Policy Report* featuring the work of Oscar Barbarin on the implications of developmental science for the President's "My Brother's Keeper" initiative.

Oscar Barbarin

"An abiding belief in American society is in the ideal that everyone should have a fair chance at success in life, regardless of origin, upbringing, race, gender, or ethnicity," wrote the editors in the report's introduction. It was an ideal that was becoming increasingly complicated to uphold as the country's demographics continued to change rapidly.

An International Nation

By the time Sam Odom had returned to head FPG in 2006, nearly one in three children enrolled in Head Start or Early Head Start lived in a household in which a language other than English was spoken. With FPG's renewed strategic emphasis on diversity, understanding how and why children who have lower English-language abilities than their peers benefit from programs like Head Start and public Pre-K—as well as applying that understanding—would become the mission of

"Positive impacts of preschool can be as strong or stronger for dual language learners and children of immigrants, compared with their English-speaking or native-born counterparts."

several projects and studies designed to help dual-language learners (DLLs) in preschool and beyond.

Under principal investigator Dina Castro, FPG's Center for Early Care and Education Research–Dual Language Learners (CECER–DLL) led national activities designed to improve the state of knowledge and measurement in early childhood research on young DLLs and their families, further advancing the evidence base for practices to support young development and learning. CECER–DLL sponsored a Policy Forum on Early Development and Education of Dual Language Learners at the National Press Club. CECER–DLL's principal investigators also briefed House and Senate staffs on a report from FPG for state and federal lawmakers to reference when considering how to fund and assess Head Start, publicly funded preschool, and literacy and cognitive development programs.

For several years, Castro also led FPG's Nuestros Niños Program. With co-principal investigators Cristina Gillanders and Donna Bryant, as well as contributions from Michael Willoughby and Ximena Franco, Nuestros Niños examined strategies for promoting school readiness for DLLs. Originally, the project's goals were to examine how well early childhood and intervention programs met the educational and linguistic needs of Latino children birth to age 5, as well as their families' needs, and to identify emerging policies and practices that supported these efforts. The second phase would assess the effects of professional development on teaching practices and child outcomes related to language and literacy among Latino English learners. The project then would evaluate the effectiveness of the Nuestros Niños intervention on the short-term and longer-term outcomes of Spanish-speaking English-language learners.

"We know that early childhood is a critical period for children who are dual-language learners," said Virginia Buysse in 2014, after publishing a comprehensive review of research on DLLs, which confirmed that widely available public programs were helping these learners make important academic gains. "Many of them face the difficult task of learning a new language while acquiring essential skills to be ready for kindergarten."

According to Ellen Peisner-Feinberg, who co-authored the review with Buysse and who also was leading the evaluations of statewide Pre-K programs in North Carolina and Georgia, dual-language learners enter kindergarten with skills that differ substantially from their peers. "English proficiency has been linked to school performance,

educational attainment, and the future economic mobility of Latino students," said Peisner-Feinberg. "These children lag behind their peers when they begin school, though, and the gap only widens as they grow older."

Buysse and Peisner-Feinberg's review found evidence to suggest that dual-language learners benefit from attending widely available, well-regulated early childhood programs, such as Head Start or state-funded public Pre-K. Moreover, these programs were more beneficial for children who began school with lower English-language abilities and less exposure to English—findings consistent with previous research.

"We also found some support across several studies both for using English as the language of instruction and for incorporating the home language into strategies that focused on language and literacy," said Buysse.

The findings dovetailed with a research brief that the Foundation for Child Development funded and produced in collaboration with the Society for Research in Child Development (SRCD), on which Peg Burchinal was co-author. According to *Investing in Our Future: The Evidence Base on Preschool Education*: "Positive impacts of preschool can be as strong or stronger for dual-language learners and children of immigrants, compared with their English-speaking or native-born counterparts."

The SRCD brief also noted that there "is emerging research that preschool programs that systematically integrate both the children's home language and English language development promote achievement in the home language as well as English language development." In addition, "home language development does not appear to come at the cost of developing English language skills, but rather strengthens them. Thus, programs that intentionally use both languages can promote emergent bilingualism, a characteristic that may be valuable in later development."

On the eve of FPG's 50th anniversary, scientists also would seize a new opportunity to study classroom dynamics when the principal of a Spanish-immersion elementary school approached them with a mystery. FPG researchers Doré LaForett and Ximena Franco would examine how the school's language immersion program affects different students' academic engagement and social networks.

"The principal had noticed something that immediately got our attention," LaForett explained. "She said it seemed to her that students whose home language was Spanish weren't participating in classes—even when teachers primarily taught in Spanish."

If in fact this was the case, it seemed to contradict theory and expectations about Spanish-speaking learners in immersion classrooms. As a result, LaForett and Franco launched a partnership with the elementary school. "We're looking at which students hang out with whom and which students actually are participating in class," said LaForett. In the end, the researchers hope to answer questions about home language, the language of instruction, peer networks, and classroom participation—and how these pieces of the puzzle fit together.

"No one else is doing this," LaForett said.

Shifting demographics had made the United States an increasingly international community, while findings continued to mount about the importance of early environments for dual-language learners. But FPG wasn't only addressing the new international communities within U.S. borders. The institute was actively lengthening its global reach.

FPG Global

"FPG will seek to extend our contributions in research and collaboration to the international level," Sam Odom had said shortly after becoming director, and after the institute's intensive strategic planning, an international emphasis formally emerged as part of the new vision.

While keeping state and national ties strong, FPG would enter a new era of global engagement. FPG forged new ties with Zhejiang Normal University in China and developed a memorandum of understanding with a hospital in Singapore and an autism center in Saudi Arabia, which resulted in FPG experts hosting and travelling to meet new international colleagues. Implementation scientists also took key roles in global conferences, most recently in Dublin, and passports for FPG's implementation gurus filled with stamps as international demand rose for their expertise. On other fronts, a former FPG postdoctoral fellow from Greece created a seminal instrument for measuring inclusion in classrooms and led training at FPG. Camille Catlett held workshops

Chih-Ing Lim presents to a visiting delegation from Singapore

in India, and the Family Life Project collaborated with a visiting scholar from the Netherlands. Pam Winton and Virginia Buysse delivered presentations in Australia, and Ching-Ing Lim traveled to Jakarta. Visiting scholars from Bangladesh and Sweden journeyed to FPG to learn about evidence-based practices for children with autism, and FPG's autism experts journeyed to international conferences. On behalf of gifted students and children with special needs, Mary Ruth Coleman traveled to Scotland, Peru, the Netherlands, and China. As FPG celebrated its 50TH anniversary, Christina Kasprzak also took FPG's technical assistance expertise to Singapore.

Although FPG's Abecedarian Project already had become internationally renowned, Joe Sparling was reinvigorating the project's transcontinental legacy on the other side of the planet. At the Univer-

FPG experts traveled around the world and welcomed the world's experts and its next generation of scientists to Chapel Hill.

sity of Melbourne, he operated a 3-year longitudinal study that made use of an adaptation of the Abecedarian Approach in two remote Aboriginal towns. The project used a new edition of *LearningGames*® that included cultural adaptations and all new photographs of indigenous families and children. He also trained pediatricians and other health professionals to implement the Abecedarian Approach as part of the parent education and support program offered in China's Maternal and Child Health Hospitals.

Back in North America, Sparling consulted on a study of the Abecedarian Approach in an urban child care center in Winnipeg, Manitoba, where the enrolled children were from First Nations or recent immigrant families. Further east, he consulted with a community college (Cégep de Saint-Jérôme) north of Montreal on the training of family child care providers and other early childhood professionals; *LearningGames*® was published in French as *Jeux d'enfants*, and several thousand early childhood workers were trained in a 12-hour course. In Mexico, Sparling has provided professional development for 75 leaders in the Centros de Desarrollo Infantil network in Monterrey, Nuevo León, serving over 3,000 children enrolled in high-quality child care centers and over 1,000 in parent-child education groups.

Supporting teachers with innovative and effective modes of instruction was not a new part of FPG's mission, but Pam Winton had launched a national center that would typify a new approach to professional development, showcase FPG's potential for global impact, and reveal the potential of three ubiquitous lower-case letters to inform classroom instruction around the world: *www*.

A New Era for Professional Development

Since the early 1990s, Pam Winton and Camille Catlett had helped faculty at colleges and universities better prepare teachers before they entered the field. More recently, Catlett had been serving on Supporting Change and Reform in Preservice Teaching in North Carolina (SCRIPT-NC), which partnered with community college programs across North Carolina to better prepare early childhood educators to meet the needs of young children with disabilities and children who are culturally and linguistically diverse. Tracey West, the project's principal investigator, with Catlett and co-principal investigators Dale J. Epstein and Chih-Ing Lim, won the Engaged Scholarship Award from the UNC Office of the Provost for the project's work.

Meanwhile, Winton and her co-principal investigator Virginia Buysse were collaborating on CONNECT: The Center to Mobilize Early Childhood Knowledge, with Epstein and Lim also joining the project. Their center provided free online training to help early childhood educators learn how to teach young children with disabilities. Like SCRIPT-NC, it would include a central component of online instruction, but its learning modules would exemplify the web's power to take professional development beyond state and national boundaries. To date, CONNECT has delivered its cutting edge instruction to hundreds of thousands of web users in more than 180 countries.

Winton said the popularity of the online modules was a classic case of supply and demand. "The research showed that many early childhood practitioners didn't have the confidence and skill they really needed to serve young children with disabilities," said Winton. "Early childhood teacher preparation programs often don't require any courses on working with children with disabilities—even when a program's stated mission is to prepare early interventionists and early childhood special educators."

Each of CONNECT's seven modules focused on a discrete practice in a key content area to build the capacity of early childhood practitioners for evidence-based decisions. With a no-cost price tag and the globe-shrinking power of the web, CONNECT's multimedia instruction would circumnavigate the planet and generate over 3 million page views.

While CONNECT's influence spread around the world, other FPG projects' online instruction also found their own successes. FPG's autism team, building on the earlier popularity of its module on the early identification of autism, launched an entire series of successful modules based upon the evidence-based practices the team had identified for the National Professional Development Center on Autism

Spectrum Disorder. Online instruction also become a staple of implementation science at FPG, and Fixsen and Blase's projects would build the online Active Implementation Hub, which itself would generate hundreds of thousands of page views for its modules and lessons. Over 70,000 readers would flock to Nicole Gardner-Neblett and Kate Gallagher's *More Than Baby Talk*, a free online manual for igniting the language skills of toddlers. Winton also would create The PDC@FPG, an innovative professional development center that both preserves materials beyond their projects' funding periods for ongoing use and operates as a clearinghouse for the institute's online instruction and new offerings, including training workshops, conferences, and more. By adapting the content from CONNECT modules, her team became the first to offer online continuing education courses through the new center.

Winton's CONNECT team had hurdled the language barrier, too. In addition to translating CONNECT content into Spanish, they collaborated with FPG visiting scholar Haiying Guo, a professor of Special Education at Handan College in China's Hebei Province, and Biying Hu, a professor at the University of Macau in Taipa, to offer versions of the modules in Mandarin. Biying Hu piloted the Chinese version of CONNECT's first module with a group of preschool teachers in Beijing.

With a no-cost price tag and the globe-shrinking power of the web, CONNECT's multimedia instruction would circumnavigate the planet and generate over 3 million page views.

Another fruitful cross-national collaboration brought CONNECT to Europe. Raquel Corval was an FPG visiting scholar from Portugal, where she lectured on early intervention for the School of Education at *Instituto Superior de Educacao e Ciencias,* as well as serving as a team member of the school's early intervention center. During her time at FPG she translated, adapted, and implemented CONNECT modules for her home country.

"I can see how the CONNECT modules can fill the gap in Portugal for early childhood professionals who may not have enough skills and knowledge to respond to the everyday challenges that they face," Corval said during her stay in the U.S. "In the future, who knows if this doesn't change policies in Portugal?"

Webcam Coaching and Pioneering Teachers

While the web could take instruction worldwide, it also could fortify the skills of North Carolina's own present-day and up-and-coming teachers. As the state's community college faculty came to rely on Tracey West's SCRIPT-NC for guidance on the course content they were using with the next generation of teachers, another FPG project was utilizing technology to revolutionize reading for early elementary schoolers across the state. Just outside the two-stoplight town of Norlina, Northside Elementary stood at the forefront of reading instruction. Teachers at the Warren County school were part of an innovative

pilot program that used live webcam coaching to help teachers with over 600 struggling readers.

Along with educators in five other rural NC counties, Northside's teachers were collaborating with FPG and UNC's School of Education on the Targeted Reading Intervention webcam project. The project used a literacy coach, based at UNC, who provided real-time feedback by webcam to teachers while the teachers worked in 15-minute one-on-one sessions with students. Each teacher could see and hear her literacy coach, and the coach could see and hear the teacher as she worked with the student.

"Reading is the foundation for learning in school," said Lynne Vernon-Feagans, who also was directing FPG's Family Life Project. "And with the Targeted Reading Intervention, struggling readers are gaining at the same rate as their peers."

Such rapid gains are atypical for struggling readers. Vernon-Feagans, who developed the Targeted Reading Intervention's webcam approach, said the TRI also is less disruptive to classrooms than other interventions.

Instead of districts covering the costs of employing a reading specialist, hiring one-on-one tutors, buying a new curriculum, or paying the travel expenses of experts to remote rural areas, a half-time graduate assistant can web-coach up to 12 teachers already in place in the schools.

Because even most remote NC schools have online access to free iChat or Skype services, webcam coaching could be effective in rural and non-rural schools across the entire state—and beyond. Instead of districts covering the costs of employing a reading specialist, hiring one-on-one tutors, buying a new curriculum, or paying the travel expenses of experts to remote rural areas, a half-time graduate assistant can web-coach up to 12 teachers already in place in the schools.

"I'll be honest. At first, I was against it," says Katherine Wilson, a kindergarten teacher at Northside. "I didn't see how I was going to pack something else into the school day. But it really does work."

"We're the pioneers," said Kendra Davis, who teaches second grade at Northside. "Kids really love it, too. They show tremendous growth in their comprehension and fluency. They just get really motivated."

Technical Assistance Roars into its Fifth Decade

In addition to its emphases on policy and evaluation, a heightened global mission, diversity, professional development, and implementation science, FPG's 2010 strategic plan maintained the Institute's long-running dedication to technical assistance. Two years after leadership had finalized the plan, Lynne Kahn's NECTAC received a new multi-year grant and became the Early Childhood Technical Assistance Center (ECTA).

Kahn also headed the Trohanis TA Projects, several of which supported states by facilitating strategic planning and program man-

agement, as well as by embedding evaluation into the implementation process. According to Christina Kasprzak, who served with Kahn as co-director of the ECTA Center, the Trohanis TA Projects were bound together by common principles and values, overlapping staff, overlapping missions, and overlapping clients—many of whom are state administrators. All clients still worked with services for young children with disabilities and for the families of these children.

"Under Lynne's leadership, the number and diversity of TA projects has grown tremendously," said Kasprzak. Despite commonalities over time and across projects, the content of the Trohanis TA Projects varies widely.

According to Kasprzak, sometimes the mission supports the overall implementation of the Individuals with Disabilities Education Act. "Sometimes we have a very targeted focus, helping with longitudinal data systems or outcome measurement systems, for example, and sometimes we may have very small projects within a state, such as helping the North Carolina Early Intervention program with their family survey."

The Office of Special Education Programs provided the multi-million-dollar grant that still powers the ECTA Center and which brought Kahn's ECO Center under the ECTA umbrella. "Our mission is really to improve state early intervention and the early childhood special education service systems," Kasprzak said, "as well as increasing the implementation of effective practices and enhancing outcomes for young children."

In keeping with FPG's tradition since the paradigm wars of the 1980s, one of the ECTA Center's key activities focused on systems building.

"We're working on figuring out a cutting-edge systems framework that really helps states think about what it means to have a quality system," said Kasprzak during the early stages of the process. After eighteen months of development, they created a comprehensive tool—the *System Framework*—designed to support states in building and sustaining high-quality early intervention and preschool special education systems.

"Essentially, we wanted to put together the content for states to be able to evaluate their systems and then use that data to plan for improvement," said Kasprzak. "We wanted to design a tool to help each state fully consider what it means to have a high-quality system."

Katy McCullough, a TA specialist at the ECTA Center, said that from the initial stages of building the *System Framework,* the Center kept its eye on the end game: positive outcomes for children with disabilities and families receiving services under Part C and Section 619 of IDEA. "We started by asking *what actually has to be in place for*

"You don't get good outcomes if you don't implement effective practices at the local level. And if we don't have a quality system, we can't ensure that effective practices are happening at the local level."

that to happen?" she said. "The answer: implementation of effective practices. Then, *how do we ensure that those will be in place?* Well, that's where the framework comes in."

Development of the framework included state coordinators from six partner states and dozens of additional experts and authorities, including core staff at the ECTA Center, other crucial personnel in the partner states, and a technical work group of renowned early childhood professionals.

"It was a huge team," said Kasprzak. "We wanted to make sure we heard as many voices as possible to help us come to consensus."

"When we began to conceptualize the framework, we landed on several cross-cutting themes," said McCullough. "Using data for improvement was one of the most important. We want to make sure states are getting the data they need to make good decisions."

The Center for IDEA Early Childhood Data Systems (DaSy) developed the framework's "data system" component. The ECTA Center also collaborated closely with the Early Childhood Personnel Center and the Early Childhood Systems Working Group. In partnership with the DaSy Center, the ECTA Center additionally developed a corresponding self-assessment for the framework to assist states as they evaluate their Part C and Section 619 systems, as well as develop, implement, and track progress on improvement plans.

Measuring outcomes—with a focus on children and families—remained central to the ECTA Center's mission. "You don't get good outcomes if you don't implement effective practices at the local level," said Kasprzak. "And if we don't have a quality system, we can't ensure that effective practices are happening at the local level."

From Ear Infections to Obesity

Ever since Al Collier's team had begun taking throat cultures at the child care center in the 1960s and through the subsequent branching of FPG's medical studies, FPG researchers have been investigating the health of young children and how it contributes to development. Not surprisingly, this became another core area of emphasis in FPG's new planning, and FPG projects would address health from a variety of perspectives.

As First Lady Michelle Obama's *Let's Move!* initiative aimed to solve the problem of obesity within a generation, Allison De Marco was helping develop an innovative physical activities guide to help North Carolina fight childhood obesity, and new research revealed that when teachers directed these physical activities, young children became more active and less sedentary.

"In the past 20 years, childhood obesity rates have skyrocketed," said De Marco. "And for the first time in over a century, children's life expectancies are declining because of increased numbers of overweight kids."

De Marco, Susan Zeisel, and Sam Odom—with support from the Blue Cross Blue Shield of North Carolina Foundation—developed a guide for the foundation's Be Active Kids program. After training lead child care teachers and their assistants they conducted a study of the program's effectiveness in both indoor and outdoor environments for children from six NC classrooms.

De Marco said the *Be Active Kids* guide worked to increase activity and to decrease sedentary behaviors, and results are most striking when teachers head the activities. "When teachers directed the activities, activity levels increased in all six classrooms," she said. "And moderate to vigorous activity increased in five of six."

While the news about the Be Active Kids program was promising in North Carolina, far from the program De Marco's research was revealing a different story in kindergartens in China. Collaborating with researchers on a study published in the *International Journal of Early Childhood*, De Marco looked at 174 classrooms from 91 kindergartens in the Zhejiang Province. According to the study, children had "inadequate opportunity for outdoor play, including free play, as well as low level of physical activity." For policymakers in the province, they emphasized supporting the quality of outdoor environments so that children's play could enhance early childhood development and learning.

De Marco also headed FPG's project to evaluate Shape NC, an initiative that assisted communities and child care programs across North Carolina in promoting healthy eating and physical activity among the state's youngest children. Meanwhile, FPG's Yi Pan, Nina E. Forestieri, and longtime researcher and fellow Jonathan Kotch collaborated with scientists from several universities on a study that revealed the effectiveness of a nutrition and physical activity self-assessment for child care intervention. Barbara Goldman and a team of researchers found that flame retardants can appear in breast milk and may affect young children. Lynne Vernon-Feagans was heading a new project to examine the associations between and among economic adversity, parent-child interactions and relationships, and children's immunological functioning in middle childhood, relying in part on data from the Family Life Project. FPG also was evaluating Smart Start's Child Care Health Consultant Project.

"In the past 20 years, childhood obesity rates have skyrocketed. And for the first time in over a century, children's life expectancies are declining because of increased numbers of overweight kids."

In addition, the Abecedarian Project's 2014 findings about the long-term effects of high-quality early care on coronary health attracted widespread media coverage. Lower rates of pre-hypertension for adults in their mid-30s and their lower risk for experiencing total coronary heart disease were groundbreaking findings for the power

of high-quality early care and education, with potentially tremendous implications for preventative health policy. Until then, the project had become known for its findings that implied long-term benefits for the physical health of participants due to their less frequent tobacco and drug use, as well of course for the studies' findings of intellectual benefits and better long-term educational and professional outcomes for participants.

Over the years, the Abecedarian Project also had revealed another important benefit: fewer of its participants experienced depression. Emotional health was another crucial component of child development to which FPG was devoting considerable attention.

Emotional Health

The close relationship between emotional and physical health and their impact on child development—and on the ecology surrounding the child—has long been a focus of FPG work, assuming many incarnations even before Jim Gallagher's CIREEH project in the late 1970s began looking at how families coped with having a child with disabilities. Many of FPG's new autism projects were dedicated to facilitating the social and emotional health of children and youth with autism—and in supporting their families and the people who provided them with services. A number of FPG projects also targeted other groups to explore and provide support for emotional health.

The content of FPG's work went beyond physical health to encompass depression, substance abuse, prejudice, relationships, and much more, addressing and unlocking the critical roles mental and emotional health play in child and adult lives. New research, for instance, revealed that a mindful disposition in teachers was associated with alleviating lasting physical and emotional effects of their childhood adversity. It was the first study to examine relationships between childhood adversity, mindfulness, and adult health. Temple University's Robert Whitaker said the findings were especially important because adults who were abused or neglected as children typically experience poorer health.

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"Previous research has shown that childhood trauma worsens adult health through changes in how the body responds to stress," said Whitaker. He added that some people might adopt poor health behaviors, like smoking, to cope with stress. As a visiting scholar at FPG, Whitaker had collaborated with Kate Gallagher on the study, which surveyed 2,160 adults working for Head Start, the nation's largest federally-funded early childhood education program.

According to Gallagher, one of the study's most striking features was its focus on these teachers and staff, who are responsible for teaching and caring for some of America's most vulnerable children.

"It's essential for adults working with young children to be well—physically and emotionally," said Gallagher. "Better health enables better relationships with children, and research has long demonstrated that good relationships are crucial for children's learning and social-emotional development."

While healthy teachers make better teachers, schools also must be able to match their programs and services to their students to best meet those children's needs—and new research on high school students with attention-deficit/ hyperactivity disorder (ADHD) provided critical clues about how schools could do this for an important subset of the student population. The study revealed that high school students with ADHD were using an unexpectedly high rate of services for their age group, yet many low achievers with ADHD were not getting the academic supports they needed.

"Although school procedures for identifying academic impairment in this population appear to be working for the most part, our results also suggest that 20–30% of students with academic impairment and ADHD have fallen through the cracks," said Desiree Murray, FPG's associate director. "There is a need for greater or more effective academic supports for a substantial minority of the students in our sample."

Desiree Murray

The new findings enabled Murray's team to make recommendations for high school support staff serving students with ADHD. "Evidence-based practices can help improve long-term outcomes for high school students with ADHD," said Murray. "Providing effective services may contribute to increased graduation rates and successful transitions to adult life."

In addition, Murray holds workshops for professionals who plan to train teachers in the evidence-based Incredible Years Teacher Classroom Management Program. The program not only strengthens teachers' management skills in classrooms with 3-to-8-year-olds, it promotes children's social, emotional, and academic competence, as well as reducing classroom aggression and lessening disruptive behaviors. Teachers even report decreased stress levels after attending the training. Murray also created a series of popular reports for the federal Administration for Children and Families on self-regulation and toxic stress, interventions, and program recommendations.

Meanwhile, Debra Skinner, veteran of Fragile X work and other research, was capturing what she called "the ethnography of the result." With FPG post-doc Kelly Raspberry, Skinner studied the social and cultural aspects of clinical exome sequencing, a cutting-edge option for medical professionals to diagnose the genetic cause of illnesses and their potential courses of treatment. "There are famous chronicles of the discovery of the double helix or of the making of penicillin," Skinner said. "This is one of those times: I get to chronicle genomic medicine as it's being formed."

Skinner, the director of FPG's Qualitative/Ethnographic Methods and Analysis Core, also examined motherhood in the rural South, finding that most mothers reported having depressive symptoms currently or in the past, due primarily to relationships, financial issues, and parenting stresses. Mary Bratsch-Hines used data from the Family Life Project to reveal that unstable child care could affect children's social

development by age 4, and in another Family Life Project study, researchers found that exposure to greater levels of inter-parental conflict, more chaos in the household, and more time in poverty were key contributors to young children's ability to recognize and modulate negative emotion. Allison De Marco also used the project's database to explore how families in rural communities in North Carolina survived the recession in part through strong connections to religious institutions, more access to extended family, and a greater sense of community.

FPG's efforts to understand and support emotional health have taken many forms. Diane Early and Kelly Maxwell found that two professional development programs for pre-kindergarten teachers in Georgia increased the emotional support that children received from their teachers. Camille Catlett authored a salient brief on resources for early intervention professionals about the growing challenges of illicit substance abuse for anyone supporting young children who have been prenatally exposed. FPG's implementation scientists were working with Canada's Centre for Addiction and Mental Health to improve outcomes for children and youth, and in North Carolina, Allison Metz's team used "Success Coaches" and implementation science to help keep parents and kids together. FPG's National Implementation Research Network also helped integrate the tenets of implementation science and program evaluation into a coordinated framework to support a child welfare initiative.

From its roots in the mid-1960s, FPG's work had grown and branched and was well into the process of developing a new generation of buds and shoots, when the man who had nurtured it from a sapling to a mature tree passed away.

The Field Mourns the Loss of a Giant

James J. Gallagher died on Friday, January 17, 2014, at the age of 87.

"For many years, Dr. Gallagher was a mentor, colleague, and friend," said Sam Odom. "With this grief, we also need to remember his great life and achievements."

Gallagher's collection of awards had grown the year before with more major recognition. UNC's School of Education had honored him with the Peabody Award for his extraordinary contribution to the field of education.

"James J. Gallagher has sparked, shepherded, and inspired an age of enlightenment in more than six decades as a pioneer in the discipline of child development and social policy—and as the nation's premier scholar in the fields of giftedness and developmental disabilities," said Bill McDiarmid, dean of the School of Education, who presented the award.

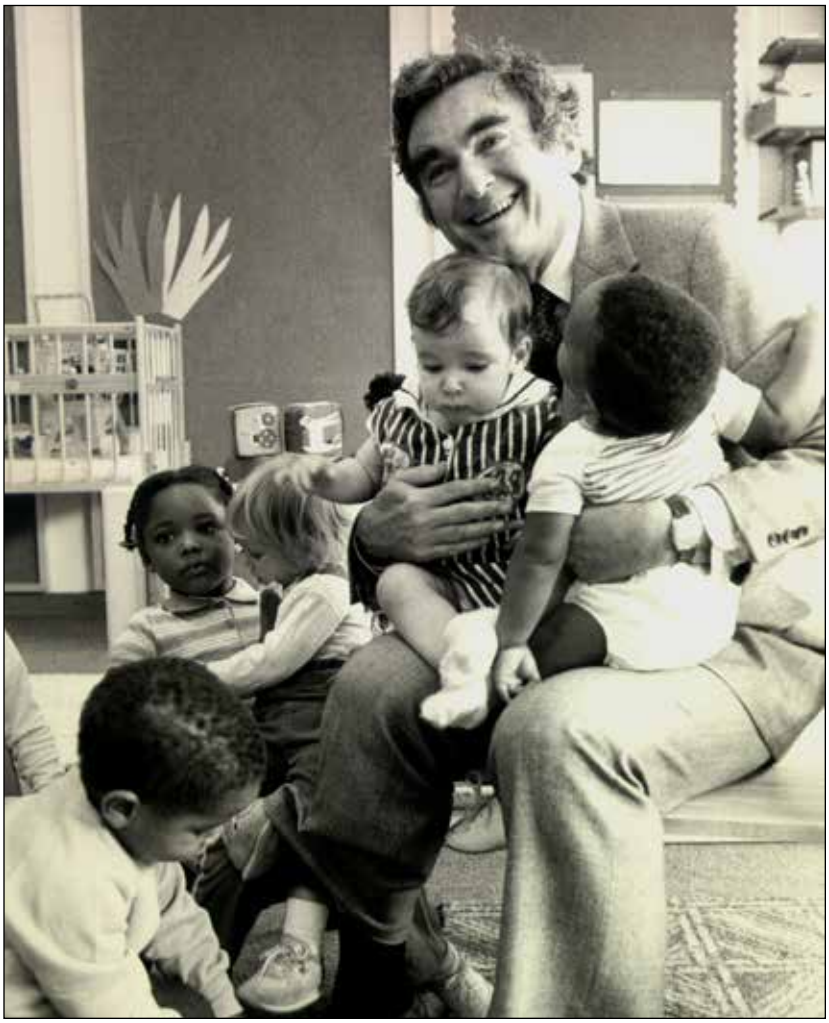
Earlier in 2013, former North Carolina state senator Howard Lee had presented Gallagher with another honor, the prestigious Old North State Award. The Office of the Governor issues the award to people with a proven record of exemplary service and commitment to the state.

As news of Gallagher's passing spread, his colleagues were quick to note a lifetime of priceless service, and former N.C. state senator

From its roots in the mid-1960s, FPG's work had grown and branched and was well into the process of developing a new generation of buds and shoots, when the man who had nurtured it from a sapling to a mature tree passed away.

Ellie Kinnaird called him a giant. "I am so sorry for his loss to the field for all children," said Kinnaird. For longtime FPG executive board member Ron Haskins, a senior fellow at The Brookings Institution, Gallagher evoked a centuries-old remark by the English poet Andrew Marvell: "So much can one man do who doth both know and act." Don Stedman, president and CEO of New Voices Foundation and former Dean of UNC's School of Education, emphasized his 55-year friendship with Gallagher, which had begun even before the two of them had joined forces as early FPG trailblazers.

Writing for *Roeper Review* the year before he died, Gallagher argued for an end to the "unilateral disarmament" of our educational system. "If the national defense plans for the 21st century are based on brains, not just bombs," he contended, "then we need time and concentrated effort to create conditions where our education system turns out intelligent citizens ready to build a society that is impervious to outside influence or economic attack." Gallagher also had been finishing the 14th edition of *Educating Exceptional Children* with co-author Mary Ruth Coleman, his colleague of thirty years.



Coleman, with Gallagher's daughter, Shelagh, paid tribute to his work in a special issue of the *Journal for the Education of the Gifted*: "Dr. Gallagher's research built a knowledge base to support practice, inform policy, and shape educational theories. His work encompassed all levels of education, from the classroom to international networks."

Olson Huff, former chair of the Board of Directors of the North Carolina Partnership for Children, joined others who described Gallagher as an inspirational figure: "His legacy will live on as long as there are children to be born."

Early Care and Education

Gallagher's passing came during another period of transition for FPG, which also recently had included the closing of its own child care center. A broad and disparate 21st-century agenda meant that FPG could study and help far more children in North Carolina, across the country, and around the world—and do so far more efficiently—through dozens of projects and approaches than by administering its own child care program.

The program's list of directors is a catalog of stars, people highly invested in caring for children who also recognized the value of the research that often led to changes in their classroom routines: Marjorie Land, Elsa Hjertholm, Margaret Holmberg, Lee Cross, Annie Pegram, Sally Nussbaumer, Bev Mulvihill, Sarah Mansfield, Anita Payne, P.J. McWilliam, Debby Cryer, and Maggie Connolly. Kate Gallagher served as the final director of the center, and two years after it closed she would draw on her experiences there to deliver the most popular TED Talk at UNC's 2015 TED conference. Her own transition to several new projects was analogous to FPG's, as the institute continued to focus on another part of its legacy—early care and education—through studies of children of all backgrounds and abilities.

During a budget hearing for the Early Education Panel, a subcommittee for the U.S. House Committee on Appropriations heard expert testimony citing two such studies: the Abecedarian Project and Noreen Yazejian and Donna Bryant's long-running study of Educare Schools. Walter S. Gilliam, director of Yale's Edward Zigler Center in Child Development and Social Policy, provided the subcommittee with an overview of the research on child development and the impact of early education before specifically addressing the question of how best to target federal investments.

"Early care and learning programs should be integral components of our nation's educational strategy," Gilliam argued. "Both educational and economic research confirm common wisdom—supporting and intervening early is far more effective and cost-beneficial than waiting for problems to become more intractable and costly."

"These findings show that more high-quality early education and care can narrow the achievement gap before children reach kindergarten. Children from low-income families can improve their standing relative to their middle class peers."

Gilliam then turned to new findings from the Educare Learning Network Implementation Study, for which Yazejian's team examined the effects of Educare's high-quality birth-to-five program. Gilliam explained that "children who receive the supports early in life and have a longer duration in the program do better on school readiness assessments when heading to kindergarten," adding that this was "particularly true for dual-language learners."

The Educare program provides full-day, full-year center-based education and care in classrooms that meet the highest professional standards for teacher education, group size, and child-teacher ratios. Yazejian's team had looked at children's receptive language skills—the ability to hear and understand words—because those particular skills are an excellent predictor of later academic success.

"These findings show that more high-quality early education and care can narrow the achievement gap before children reach kindergarten," Yazejian said. "Children from low-income families can improve their standing relative to their middle class peers."

Seamless Changes and Helping People Do What They Do

In the spring of 2015, Barbara Wasik agreed to step in for Sam Odom. The FPG director, who had been appointed to the Committee on Supporting the Parents of Young Children for the Institute of Medicine of the National Academy of Sciences, was taking a leave for the semester to focus on research interests.

Wasik's scholarship and service on FPG's behalf already had proven invaluable for decades—almost since the institute's earliest days when its home was a collection of trailers. She had worked with Donna Bryant and pioneers from FPG's seminal Abecedarian Project on projects in the 1970s and 1980s and later directed Partners for Literacy. By the time the former FPG associate director began serving as its new acting director, she had long since become a national leader in developing interventions for children at risk of school failure. These interventions addressed a wide range of concerns, and her work over the years had led to the development of a number of instruments. Her record of service already included consulting for national organizations, advising on national boards, and holding office in state and national organizations. Among her many accomplishments as acting director was unceasing dedication to preparing FPG for its golden anniversary, along with planning committee chairs Don Stedman and Mary Ruth Coleman, as well as with critical support from Stephanie Ridley.

Before she returned the director's chair to Odom, Wasik also had the unenviable task of announcing the departure of a longtime TA trailblazer at FPG. Lynne Kahn, director of the Trohanis TA projects, was retiring. Kahn had coined the simplest of definitions of technical assistance—"helping people do whatever it is they're trying to do more efficiently and more effectively"—and had served children with

disabilities and their families at the local, state, and national levels for three decades. She also, of course, had shepherded FPG through an extremely difficult transition after Pat Trohanis died.

"She has been a positive influence on our work with other organizations and projects on behalf of all young children," said Betsy Ayankoya, associate director of technical assistance at the ECTA Center. "Her idea for 'co-staffing' with national centers stretched us in so many ways and helped us to learn new content and function in different contexts."

Robin Rooney, principal investigator of the North Carolina Early Learning Network, acknowledged Kahn's critical role in guiding the creation of the statewide training and TA system for preschool. "With her help we've gotten the Network up and running—on high speed—in less than two years," Rooney said.

Barbara Wasik

Joan Danaher, associate director of information resources at the ECTA Center, credited Kahn with establishing the footing for much of the center's current work. "Her collaboration with funders and peer TA projects has benefited, and will continue to benefit, the programs we serve directly as well as other early childhood programs that interface with early intervention and early childhood special education," Danaher said. "She has been committed to nurturing and mentoring the next generation of TA leaders and leaves us in good stead."

One of those mentees was Christina Kasprzak, who with Kahn had co-directed the Trohanis Technical Assistance Projects, including the ECTA Center. "She is passionate about what it means to provide high quality TA—helping people do whatever it is they're trying to do more efficiently and more effectively," said Kasprzak, who would become the center's new director.

The ECTA Center continues its work on many fronts, including developing new online learning modules for higher-education faculty and others to help present and future practitioners, creating a host of other resources to help professionals and families use recommended practices, and holding webinars on inclusion and other salient issues. As FPG marks its 50th, the ECTA Center also is partnering to hold a national conference on improving data and outcomes.

Lynne Kahn

The vibrancy and multifaceted nature of TA projects at FPG highlight the appropriateness of Lynne Kahn's shorthand explanation of technical assistance. She might have once coined it for the sake of smoothing over dinnertime conversation, and, to be sure, it didn't do full justice to the nimbleness and talent that has guided FPG's groundbreaking TA since the early 1970s. And, by itself, it says nothing explicit about the betterment of outcomes for children and families that have resulted from that tradition. But even though her definition is a

FPG's legacy of technical assistance has always been about "helping people do whatever it is they're trying to do more efficiently and more effectively."

great understatement, FPG's legacy in TA certainly has been about helping others do what they're trying to do.

The National Early Childhood Inclusion Institute

Along with many other efforts, FPG's technical assistance, Fragile X research, and autism projects are among the hallmarks of FPG's commitment over the years to work on behalf of children with disabilities and for the families of these children. Ever since Don Bailey's initiation of the inclusion of children with disabilities at the child care center in 1984, FPG's strong focus on inclusion also has been an important demonstration of this commitment to children with disabilities.

As FPG's golden anniversary approached, its experts long had embedded principles and practices of inclusion deeply into many of its projects and had developed others with a sole focus of promoting and fostering inclusion through evidence-based practices. For young children with disabilities, having their specialized services in regular classrooms alongside their typically developing peers had opened opportunities for successes, including at FPG's own child care center. Not only did research show that children with disabilities were learning from their typically developing peers and making developmental gains, typically developing children also were experiencing a range of benefits from inclusion.

Today, FPG's expertise on inclusion is well-established, and its National Early Childhood Inclusion Institute has become the premier event for anyone involved in the care and education of young children with special needs in inclusive settings. For fifteen years, the popular three-day conference has drawn people from around the country and the globe. Former chair Pam Winton had worked with Tracey West, Shelley deFosset, and planning teams across several disciplines to shepherd the Inclusion Institute's growth from a few dozen annual attendees to crowds that now sell out months in advance.

National figures have delivered the opening day keynotes, including disability rights activist Micah Fialka-Feldman in 2013. When that year's Inclusion Institute convened, the 28-year-old already was a longtime veteran of many battles for inclusion, the first of which had come when he was in second grade. His elementary school had directed him through a different entrance because of his intellectual disability.

"I knew I wanted to be included when I went in a separate door," he said, "I told my parents I wanted to go in the same door as all my other friends."

The following year, TV journalist Dwayne Ballen's keynote drew an overflow crowd. The former network sports anchor spoke about agony—about how it had felt to hear an administrator inform the

Not only did research show that children with disabilities were learning from their typically developing peers and making developmental gains, typically developing children also were experiencing a range of benefits from inclusion.

family there was no place for his son Julian at his school. But Ballen explained he believed so firmly in inclusion beyond the benefits that it has brought his son and other children with special needs.

"People with special needs have much to offer us," Ballen said. "I hope I'm a better person for having Julian. I hope I'm a better father. But one thing is certain, my life is better for having been Julian's father."

Federal officials debuting a new joint policy statement at FPG's Inclusion Institute.

In 2015, FPG fellow Ann Turnbull, a longtime collaborator with the Inclusion Institute, returned with her daughter Kate to deliver a keynote on the impact of children with disabilities on the lives of siblings. The institute also was ground zero for the debut of a new federal draft policy statement. At an opening day plenary federal panel, officials from the U.S. Departments of Education and Health and Human Services presented for the first time their new recommendations to states, local educational agencies, schools, and public and private early childhood programs for increasing the inclusion of children with disabilities in high-quality early childhood programs.

"The federal interagency policy statement on inclusion is a significant milestone for all of us in the field of early development and education," said Pam Winton.

In September 2015, federal officials released their finalized policy, which incorporated feedback from attendees at the Inclusion Institute and an open period for wider public comment. According to the *Policy Statement on Inclusion of Children with Disabilities in Early Childhood Programs*, "all young children with disabilities should have access to inclusive high-quality early childhood programs, where they are provided with individualized and appropriate support in meeting high expectations."

On the eve of its golden anniversary, FPG stands firmly at the intersection of research, policy, and practice.

Focus Forward

the next new frontier

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50 YEARS

FRANK PORTER GRAHAM
Child Development Institute

New Branches

"This is an exciting opportunity to look at the quality of early learning from new perspectives," Peg Burchinal said in early 2016. She was referring to her research team's new multi-year exploration of the early learning experiences of rural children from pre-kindergarten through third grade—but it was a sentiment that FPG experts might have expressed at any time over the past 50 years about the prospects for new discovery or new value for a myriad of projects. In addition to the ongoing work already mentioned, FPG is heading into its second half-century with many new projects launching simultaneously.

Burchinal's new research team includes a formidable collection of FPG scientists, including longtime evaluation expert Ellen Peisner-Feinberg and the Family Life Project's Lynne Vernon-Feagans, as well as Ximena Franco, who will study English-Spanish dual-language learners, and Claire Baker, who will look at parental involvement and the role of African American fathers in promoting academic success.

Seeds first sown in soil rich with the ingredients for change have germinated and grown into a tall, thick-trunked, sturdily branching redwood.

To capitalize on FPG's evaluation experience and expertise, Peisner-Feinberg and Burchinal—along with Pam Winton, Donna Bryant, Chih-Ing Lim, and Noreen Yazejian—also have opened the National Pre-K and Early Learning Evaluation Center. In addition, Winton and Yazejian have joined implementation science expert Allison Metz on a new center to improve outcomes for children and to support professional development systems for child care providers. "The National Center on Early Childhood Development, Teaching, and Learning will bring research-based solutions to real-world settings for children and the people who care for and educate them," Metz said.

Diane Early and her research team are initiating a new study to analyze and refine the scoring system for the third edition of the Early Childhood Environment Rating Scale (ECERS-3). Early's study is investigating how the scale's latest incarnation relates to children's social and academic growth.

Meanwhile, original Abecedarian pioneers Joe Sparling and Frances Campbell remain active at FPG—and Sparling will be leading a new series of trainings on the Abecedarian Approach through FPG's professional development center.

FPG experts also are forging a new partnership with historically black colleges and universities to form the North Carolina Consortium on African American Children and Families. Sam Odom, Nicole Gardner-Neblett, Pam Winton, Betsy Ayankoya and others are spearheading an effort to build capacity for an educational system in which African American children thrive.

Associate director Desiree Murray is launching a new study to determine the effectiveness of a small-group intervention designed to help young children with social-emotional and behavioral difficulties. "Many children with these challenges need more intensive supports than are often available through schools," said Murray.

Six hundred elementary students in 60 schools across North Carolina also are participating in a new study to test the effectiveness of a program designed to improve outcomes for children with autism spectrum disorder. Sam Odom explained that in roughly the time since he had arrived at FPG the prevalence of autism spectrum disorder had increased 200%. "This study responds to a national need to help teachers to prepare effective, research-based educational programs for children with ASD," he said. "We've found that educators want to provide a good and effective educational experience, but they may not be sure where to start or what to do."

Much more, of course, was already well underway. Seeds first sown in soil rich with the ingredients for change have germinated and grown into a tall, thick-trunked, sturdily branching redwood. Al Collier's throat cultures in FPG's child care center matured into a multifaceted array of projects that researched and supported the physical, social, and emotional health of children, families, and professionals. The Abecedarian Project developed across four decades and sprouted findings that were groundbreaking and reaffirming, with vast implications for the power of early care and education—even for early learning to affect long-term health. FPG's interest in early educational environments developed into rich, nuanced veins of inquiry into specific interventions, the development of a seamless educational model for young children, and evaluation and consultation on behalf of large, multi-site programs. FPG's pioneering technical assistance rose and grew through all climates—vast paradigm shifts, transitions, tragedy, and new missions—becoming embedded integrally in the nation's systems of services for children with disabilities. Professional development thrived on technological power to crisscross the globe or help a single first grader across the state sitting with her teacher learn how to read better. Implementation science invigorated projects across a range of human services with a flow of essential nutrients—mechanisms and structures that promoted faster, more faithful, and more far-reaching change.

Today, the obligation to bring research to policy and practice infuses FPG's mission and includes providing an editorial crown of current and former FPG experts for the seminal *Social Policy Report*. Among many other new examples: in 2016, Odom reaffirmed this obligation by delivering a presentation about North Carolina's Pre-K and Smart Start programs to the state legislature, only a few months after lawmakers working on new legislation on health insurance for North Carolina's children with autism had relied on his team's updated review of evidence-based practices for guidance. FPG's original charge to prevent intellectual disabilities has grown and branched into broad initiatives of exploration and support on behalf of children with disabilities—Fragile X Syndrome, autism spectrum disorder, and others, as well as for those children's families—and studying the inclusion of children at FPG's own child care center has bloomed in new national projects and an internationally acclaimed conference. From a small child care center with what at the time was a daringly integrated enrollment, a five-decade commitment blossomed on behalf of children and families of all backgrounds and abilities in our 21st-century melting pot.

The Next Frontier

Don Stedman, now a member of FPG's executive leadership board, had presented Sam Odom with the inaugural gift—a check from Stedman's New Voices Foundation—which launched the golden anniversary planning.

The goal was ambitious: to design a forward-focused plan for the field that would capitalize on FPG's first five decades of work. Major foundations and private donors lined up to support a national symposium of scholars, specialists, policymakers, and other experts who would gather to take an intensive lay of the land and establish a foundational vision that would carry child development, education, and special education well into the middle of the century. FPG also would honor former Governor James B. Hunt, Jr., who often had drawn heavily on FPG's expertise during his terms in office, with a lifetime achievement award for his public service to the state.

In its first 50 years, FPG has fulfilled much of the promise of the premise, directly and indirectly changing the life trajectories of innumerable children and families. But new understandings of the challenges, dynamics, demographics, and ever-shifting climates have revealed there is much more to do on behalf of children with and without disabilities. New evidence also continues to demonstrate the size of the stakes. Nobel laureate James Heckman's cost-benefit analysis of FPG's Abecedarian Project shows a significant return on early investments on behalf of children, and a report released by the President's Council of Economic Advisers cites the FPG project and fixes the return at over eight dollars for every dollar spent on similar programs, concluding that early childhood development and education programs "produce large benefits to children, parents, and society."

In 1966, Hal and Nancy Robinson could not have foreseen how significantly FPG would change the lives of children and families over the next five decades. Similarly, we cannot now fully appreciate how the next half-century of science and its application will further fulfill the promise of the premise, but FPG will build on its first 50 years while crossing into that next new frontier.

acknowledgments

It is impossible to coalesce the history of an institute comprising hundreds of projects and involving thousands of people across 50 years without omitting numerous important individuals, initiatives, and stories. This is only one way to chronicle FPG's first five decades.

Numerous sources were integral to this narrative, none more important than the presentations on FPG's history that Barbara Wasik and Donna Bryant delivered in house. Also important were an in-house presentation by Peg Burchinal on seminal studies in early education, Sam Odom's presentation on the history of special education at the 2015 fall conference of the DEC, and Joan Danaher's introduction to a special issue of *Topics in Early Childhood Special Education* in Pat Trohanis's tribute. Additionally, essential information came from dozens of issues of *Early Developments* and *ATN!* magazines, FPG's annual reports, dozens of FPG's news stories and features, Kate Gallagher's TED Talks, FPG's photographic archives, additional information from www.fpg.unc.edu and individual FPG project websites, information from the NICHD and CDC websites, an analysis by the President's Council of Economic Advisers, Eric Muller's story in the Raleigh *News & Observer* about Frank Porter Graham, information from Autism Speaks, and the institutional memory held by people at FPG kind enough to share it.

This narrative also owes a great debt to a team of 14 readers who provided editorial feedback and guidance. Special thanks goes as well to FPG's keepers of the archives over the years, Barbara Goldman and Gina Harrison.

FRANK PORTER GRAHAM
Child Development Institute

The mission of the
Frank Porter Graham Child Development Institute (FPG)
is to enhance the lives of children and families through
interdisciplinary research, technical assistance, professional
development, and implementation science. FPG generates
knowledge, informs policies, and supports practices to
promote positive developmental and educational outcomes for
children of all backgrounds and abilities from the earliest years.