EXECUTIVE SUMMARY

Using Classroom Management to Improve Preschoolers' Social and Emotional Skills

FINAL IMPACT AND IMPLEMENTATION FINDINGS FROM THE FOUNDATIONS OF LEARNING DEMONSTRATION IN NEWARK AND CHICAGO

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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

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Overview

Policymakers increasingly recognize that early childhood programs can provide a pathway to later school success for disadvantaged children. However, to be effective, preschool programs must be of high enough quality to promote children's development. This report presents the final results of the Foundations of Learning (FOL) demonstration, which evaluated an intervention designed to train preschool teachers so that they could better manage children's behavior and promote a more positive classroom learning environment. It was hypothesized that these improved skills could strengthen children's social and emotional competence, allowing more time to be spent on classroom teaching and learning.

FOL was tested in Newark, New Jersey, and Chicago, Illinois, using teacher training combined with weekly in-class support from a master's-level clinician to reinforce the classroom management skills that were covered in the training. A total of 71 preschool centers (with 91 participating classrooms) were randomly assigned to implement FOL or conduct preschool as usual. Differences in classroom practices and child outcomes between the two groups were analyzed at the end of the intervention year to assess the added value of FOL over and above standard preschool practice.

Key Findings

The evidence shows that investments in teachers' professional development improve children's preschool experiences, although the long-term effects on children remain uncertain.

- FOL was delivered as intended in both sites. Lower levels of institutional resources in Chicago, however, may have posed challenges to fully implementing the classroom-based strategies.
- The intervention improved teachers' positive classroom management in areas that it targeted directly. There was some evidence in Newark that intervention classrooms had greater amounts of instructional time and that, among teachers in the intervention group, positive classroom management was sustained one year after the intervention ended.
- Problem behavior was reduced in the intervention classrooms. Also, FOL further improved children's social and emotional competence as measured by improvements in children's approaches to learning and executive function skills (attention, inhibitory control, and short-term memory skills).
- The study provided no clear evidence that FOL improved children's early literacy and mathematics skills or that the effects described above continued beyond the preschool year, although resources limited the type and amount of follow-up that was possible.
- At approximately $1,750 per child, the FOL intervention represented a 14 percent increase in program costs in Newark and a 21 percent increase in Chicago. Based on the limited data available in this demonstration beyond the preschool year, there is insufficient evidence at this point to demonstrate that the benefits of FOL in children's academic gains, grade progression, or special needs designations outweigh its cost.

Preface

Federal and state expenditures for preschool programs serving children from birth to age 5 totaled more than $30 billion in 2011. The potential return on investment is large: high-quality preschool programs have been found to return as much as $4 to $10 in future benefits per dollar spent in preventing later risky behavior and boosting academic and labor market success. However, not all preschool programs yield positive benefits. One possible explanation is the limited amount of time devoted to "learning activities" on any given day, in part because preschool teachers are not equipped with the tools and techniques to effectively redirect children when their social and emotional behaviors disrupt classrooms.

The Foundations of Learning (FOL) demonstration tested one promising approach: providing intensive professional development, including in-classroom consultation by trained practitioners, to improve teachers' classroom management skills and the social and emotional competence of young children who display challenging behaviors. FOL sought impacts at both the classroom level (anticipating that teachers would be able to devote increased time to productive instruction) and for the children themselves (since enhancing their social and emotional competence was thought to be a strong predictor of later success in school).

This final report has some grounds for encouragement, while also pointing to the need for further refinement in both the theoretical and practical issues related to strengthening early childhood programs. While there were some promising outcomes in the FOL classrooms — more positive teacher-student interactions, more effective management of challenging behaviors, lower levels of problem behavior, higher engagement in the tasks of learning, and more instruction time — there was no clear evidence that FOL improved children's short-term academic achievement, suggesting that the FOL approach could be part of a broader preschool strategy.

The ongoing nationwide Head Start CARES study by MDRC was designed to build on FOL. It is examining three program models operating at scale and designed to enhance children's social and emotional competence. The three models use distinct approaches to changing children's social-emotional development, ranging from training on teacher delivery of classroom management procedures to play-based activities designed to support children's self-regulation. Yet another effort to improve the return on investment of preschool programs involves the role of early mathematical concepts like size, shape, and counting in children's development. Making Pre-K Count is looking at the effects on children's skills of a strong, developmentally appropriate preschool mathematics curriculum combined with intensive teacher professional development in math instruction. The body of evidence produced by these and other studies, along with the work of colleagues in the field, will provide critical lessons on how best to structure high-quality early childhood programs.

Gordon L. Berlin
President, MDRC

Acknowledgments

This final report on the Foundations of Learning (FOL) demonstration benefited from a collaboration among many organizations and individuals. From the outset, the support of early childhood education organizations in Newark and Chicago has been instrumental in planning and conducting the project. We particularly thank Dr. Gayle Griffin, Executive Director, Newark Public Schools; Nancy Rivera, Director at Newark Public Schools; Kathy Tague, Supervisor of Early Childhood at Newark Public Schools; the Newark Preschool Council; Vanessa Rich, Deputy Commissioner for the Children's Services Division at the City of Chicago Department of Family and Support Services; and Michelle Michelini and Amy Nowell at the Chicago Public Schools' Office of Strategy, Research and Accountability.

Carrying out a research demonstration of this type is possible only with the commitment and cooperation of the participating programs. We thank all the teachers and administrators at the schools, Head Start centers, and community-based programs that were part of the demonstration.

We thank the organizations in Newark and Chicago that were responsible for implementing the classroom consultation component of the Foundations of Learning program, along with the Clinical Classroom Consultant Coordinators Dorothy Jordan in Newark and Kimya Barden in Chicago, and each of the Clinical Classroom Consultants who worked so diligently to implement a high-quality program. Greg O'Donnell, Darlene Jones-Lewis, Kimya Barden, and Dorothy Jordan conducted the teacher training sessions.

University of Virginia's Center for Advanced Study of Teaching and Learning and Megan Siebert trained coders for classroom observations; a team of dedicated coders visited Newark classrooms throughout the demonstration. Survey Research Management, led by Linda Kuhn, fielded surveys throughout the demonstration, located students for follow-up data collection, and managed the child assessment process in Chicago. Lee Robeson's team also assisted with locating students for follow-up data collection.

A number of foundation funders provided indispensable support for the evaluation. They are gratefully acknowledged at the front of the report.

Stephanie Jones of Harvard University, Christine Li-Grining of Loyola University, and Fuhua Zhai of New York University drew on their experiences from the Chicago School Readiness Project to provide valuable guidance and input. Karen McFadden, a doctoral fellow from New York University, helped to compile and analyze data.

The FOL research effort has been a true partnership. At MDRC, we thank the following key members of the team: Ximena Portilla, Vivian Mateo, Francesca Longo, Farrah Parkes, Kristen Faucetta, Timothy Rudd, Andrea López, Caroline Mage, Electra Small, and Nandita Ghosh. Shirley James and her team were responsible for keying and verifying the data. Glee Holton, Shelley Rappaport, and Frieda Molina helped recruit preschool programs for the demonstration. Helen Gorden provided administrative support. Karen Paget answered our Internal Review Board questions regarding data collection. Chris Rodrigues and Ihno Lee assisted in processing data from a variety of sources. Jo Anna Hunter and Leslyn Hall provided expertise and assistance with the survey work. Gordon Berlin, Howard Bloom, Robert Ivry, Ginger Knox, John Hutchins, and Tom Brock provided valuable comments on drafts of the report. Melendy Krantz served as report coordinator. Alice Tufel edited the report; David Sobel and Stephanie Cowell prepared it for publication.

Most of all, we thank the children in the Foundations of Learning program and their parents. We hope that the lessons from this and future reports will help strengthen the quality of preschool programs in Newark, Chicago, and elsewhere.

The Authors

Executive Summary

Investments in early childhood programs are widely viewed as a promising strategy to improve the future educational achievement of disadvantaged young children. However, it can be difficult for teachers to maintain program quality if children in the classroom display challenging behaviors. For example, when some children act out aggressively or become sad and withdrawn, teachers may be diverted from instructional time to manage these behaviors. Not surprisingly, these diversions have a ripple effect on the entire classroom of children.

This report presents the final implementation, impact, and cost findings from the Foundations of Learning (FOL) demonstration. The FOL demonstration was designed to increase productive classroom time by using intensive professional development, including in-classroom consultation with trained practitioners, to improve teachers' classroom management skills and the social and emotional competence of children who exhibit challenging behavior.[1] The demonstration was conducted in two cities — Newark, New Jersey, and Chicago, Illinois — with very different preschool systems. The Newark preschool system was particularly well resourced, while the level of resources in the Chicago preschool system was much lower and more typical of urban districts around the country.

The report concludes that the FOL intervention was delivered with relatively high levels of dosage (amount of services) and quality (as rated by teachers) in both cities, with some differences in the focus of in-classroom consultation between Newark and Chicago. The program had a positive impact on teachers' classroom management, increased instructional time, and improved children's social and emotional competence during the year of the intervention's implementation. However, there was no clear evidence of improvements in children's short-term academic achievement, despite the expectation that the benefits to the classrooms and to children's social and emotional outcomes would translate into better academic skills. Moreover, the limited data that were collected showed no evidence of sustained benefits when the children made the transition to kindergarten and first grade.

Evolution of the Foundations of Learning Demonstration

The FOL program model was initially developed to test a strong theory that had emerged from developmental psychology — that children's social and emotional competence may be important

[1] As used in this report, the term "competence" refers to children's capacity to do something, and the term "behavior" is the manifestation of that competence in everyday life.

as an outcome in its own right as well as a pathway to improved academic achievement.[2] While FOL was being conducted, some researchers questioned this assertion, arguing convincingly that for academic achievement in particular, preschool academic skills may be much stronger predictors of later academic achievement than social and emotional competence.[3] Even so, that assertion is best tested in the context of studies like FOL that provide evidence about whether *targeting* children's social and emotional competence — by, for instance, improving teachers' skills in classroom management — can produce change in children's school achievement.

The FOL program model had previously been evaluated in CSRP (formerly known as the Chicago School Readiness Project) in Chicago. Encouraged by CSRP's positive early results,[4] MDRC, a nonprofit, nonpartisan education and social policy research organization, with support from a number of foundations and the active involvement of the local school and Head Start programs,[5] set out to test the model on a larger scale in Newark and Chicago.

Both CSRP and FOL sought to arm teachers with specific management strategies to handle daily classroom challenges, improve their interactions with children, and thereby enhance children's social and emotional competence. The program model included four components to be delivered across the preschool year:

- **Teacher training:** Lead and assistant teachers were invited to attend five Saturday training workshops, which were adapted from *The Incredible Years* curriculum developed by Dr. Carolyn Webster-Stratton.[6] The workshops provided instruction on how to foster positive relationships with children; they presented classroom strategies that teachers could use, such as setting clear rules; and they provided teachers with techniques to help children develop their social skills, anger management, and problem-solving ability. These strategies are widely accepted as best practices for preschool teachers and reflect good classroom management.

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[2]C. Cybele Raver, "Emotions Matter: Making the Case for the Role of Young Children's Emotional Development for Early School Readiness," *Social Policy Reports* 16, 3 (2002): 3-18.

[3]Greg J. Duncan, Amy Claessens, Aletha C. Huston, Linda S. Pagani, Mimi Engel, Holly Sexton, Chantelle J. Dowsett, Katherine Magnuson, Pamela Klebanov, Leon Feinstein, Jeanne Brooks-Gunn, Kathryn Duckworth, Crista Japel, "School Readiness and Later Achievement," *Developmental Psychology* 43, 6 (2007): 1428-1446.

[4]C. Cybele Raver, Stephanie M. Jones, Christine P. Li-Grining, Molly Metzger, Kina Smallwood, and Latriese Sardin, "Improving Preschool Classroom Processes: Preliminary Findings from a Randomized Trial Implemented in Head Start Settings," *Early Childhood Research Quarterly* 63, 3 (2008): 253-355.

[5]Support for the Foundations of Learning demonstration came from The George Gund Foundation, The Grable Foundation, The John D. and Catherine T. MacArthur Foundation, The Joyce Foundation, The Kresge Foundation, McCormick Foundation, The Nicholson Foundation, The Pew Charitable Trusts, and the Robert Wood Johnson Foundation.

[6]Carolyn Webster-Stratton, *How to Promote Children's Social and Emotional Competence* (Thousand Oaks, CA: Paul Chapman Publishing, 1999).

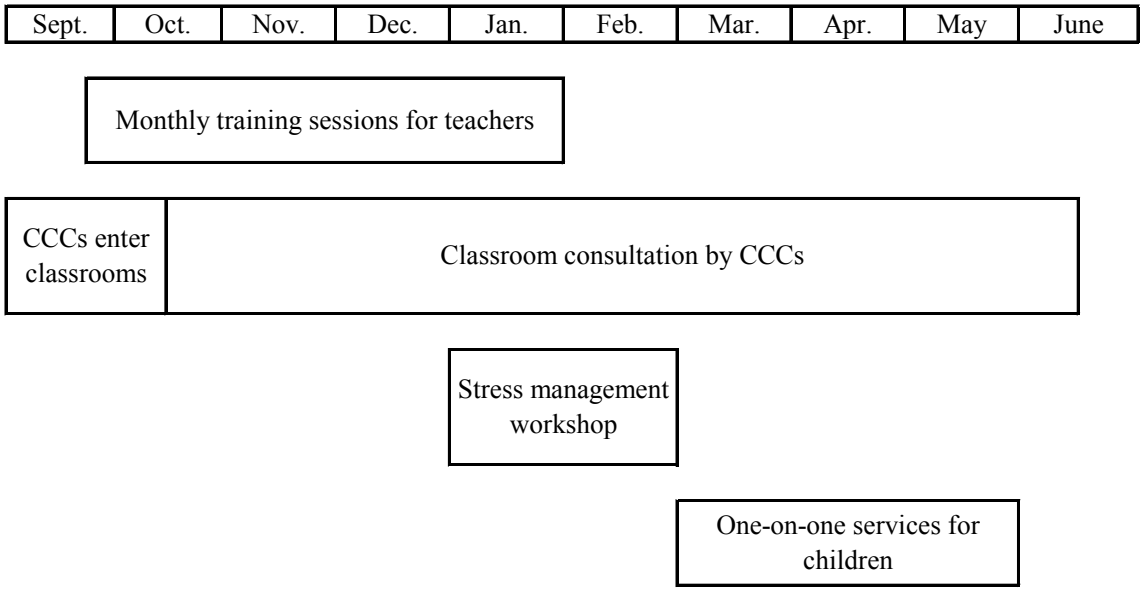
- **Classroom-level consultation:** To complement the training, teachers were assigned a master's-level Clinical Classroom Consultant (CCC) to work with them in the classroom one day per week throughout the school year. The CCCs built collaborative relationships with the teachers to help model and reinforce effective delivery of *The Incredible Years* approach in the classroom.
- **Stress management:** In the winter, teachers participated in a 90-minute stress management workshop at their program sites. CCCs also helped support the teachers' use of stress management skills and techniques throughout the year.
- **Individualized child-centered consultation:** Beginning in the spring, the CCCs provided one-on-one clinical services for a small number of children who had not responded sufficiently to the teachers' improved classroom management. By design, the individualized clinical consultation was delivered only *after* children had ample time to react to the new teaching strategies.

The timing and sequence of these activities are depicted in Figure ES.1.

The Foundations of Learning Demonstration

Figure ES.1

Intervention Timeline



NOTE: CCC = Clinical Classroom Consultant.

The FOL program components were expected to improve interactions between teachers and children, which in turn would improve a set of skills — collectively referred to as "social and emotional competence" — that enable children to engage positively with peers and teachers and to focus their attention and behavior during classroom activities, as described in Box ES.1. In addition, the CCCs' one-on-one consultations with selected higher-risk children were thought to further reduce difficult behavior of children who needed more attention beyond the larger classroom management strategies.

The Research Design

This report draws on an analysis of program impacts in the CSRP and both FOL studies, a quantitative and qualitative analysis of program implementation in FOL-Newark and FOL-Chicago, and an analysis of program costs in FOL-Newark and FOL-Chicago. The multiple studies provide an important opportunity to draw inferences about how the local context might affect the implementation, impact, and cost of the same program model in two quite different urban preschool systems.

In studying the impact of the model, all three studies (CSRP, FOL-Newark, and FOL-Chicago) used a rigorous research design, in which program sites were randomly assigned to one of two research groups: half (the program group) received the multicomponent CSRP or FOL intervention; the other half served as a control group that operated its regular preschool

Box ES.1

What Is Social and Emotional Competence?

In this report, the term "competence" is used to indicate a child's capacity to do something and "behavior" is the manifestation of that competency in everyday life. Social and emotional competence comprises a smaller set of discrete skills, such as the capacity to control negative emotions, express emotions, and communicate with peers. Social and emotional competence is thought to underlie children's behaviors, particularly in two areas that are thought to be central to longer-term success in school: (1) social behaviors, or children's positive interactions with peers and teachers; and (2) approaches to learning, or children's ability to focus their attention and behavior during classroom activities.

Strongly related to social and emotional competence is executive function. Its underlying skills are the ability to shift attention, inhibitory control (children's ability to control their immediate or automatic response in favor of a planned response), and working (or short-term) memory. Executive function skills are thought to underlie children's approaches to learning as well as their academic achievement.

program without the special enhancements.[7] With random assignment, differences in outcomes observed during the follow-up period can be confidently attributed to the program rather than to preexisting differences between the two research groups. Such differences, or *impacts,* that are statistically significant are unlikely to have arisen by chance.

The study of implementation used a mixed-methods approach in which measuring the dosage (or amount of the intervention delivered) was complemented by qualitative data, observations, and surveys that shed light on the quality and process of implementation. Intervention implementation was defined as the amount and quality of training and consultation services that teachers received, which is consistent with *The Incredible Years* approach to intervention fidelity. The study of impacts relied on somewhat different data across the three studies because of funding constraints: FOL-Newark focused on trained observers' assessments of the classroom environment and how children behaved in the classroom context; FOL-Chicago conducted standardized assessments with individual children (on their social-emotional and cognitive outcomes) — assessments that the literature suggests are linked to later outcomes in middle childhood and adolescence. Finally, a net cost analysis captured the incremental costs of the new services provided in the FOL intervention in Newark and Chicago, over and above existing services that were available to the control sites.

Findings on Program Implementation

- **The teacher training, in-class consultation, and stress-management workshops were delivered at relatively high levels of dosage and quality (as rated by teachers) in both Newark and Chicago. However, the focus of in-class consultation appeared to differ somewhat between Newark and Chicago.**

The FOL studies demonstrate that the components of the intervention can be delivered in diverse implementation settings and that teachers in both settings considered FOL to be a worthwhile and high-quality program. Attendance was strong at the teacher training sessions in both Newark and Chicago, and teachers in both cities expressed high levels of satisfaction with the training.

While the *overall amount* of in-classroom consultation was similar in Newark and Chicago, the *focus* of the consultation differed somewhat in the two cities. The CCCs in Newark engaged teachers in implementation of *The Incredible Years* strategies more consistently across

[7] In CSRP, the model included a classroom aide in the control group for the same amount of time as the CCCs in the program group. This was done in an effort to distinguish between the effect of an additional classroom staff person and the consultation services.

classrooms than was the case in Chicago, where some CCCs focused more on assisting teachers with basic classroom tasks (such as helping children during lunch time, monitoring recess, and cleaning in the classroom) than on consultation directly related to implementation of the classroom-management strategies.

- **Low levels of institutional resources and supports may present challenges to implementing classroom-based strategies.**

The differences in the way the CCCs spent their time in the Newark and Chicago classrooms perhaps reflected the more limited staffing in Chicago. Classroom resource and staffing constraints in Chicago, as well as occasional lack of support by center directors and principals in both cities, could sometimes be major barriers to implementation. Although FOL addressed teacher stress, application of new classroom management strategies might still be difficult for highly stressed teachers in understaffed classrooms.

Findings on Program Impacts

Despite some differences in implementation, a consistent story emerges with regard to program impacts in the Newark and Chicago sites. The impacts in CSRP, FOL-Newark, and FOL-Chicago are summarized in Figure ES.2, in which favorable, statistically significant impacts are denoted by plus signs and no effect is shown as 0; "NA" (not available) indicates that the construct was not measured. No unfavorable impacts were found. Having two or more plus signs across sites for a single construct provides greater confidence than would be the case if the findings appeared in only a single site.

- **The intervention improved teachers' positive classroom management. In addition, there is evidence that this improvement was sustained one year later.**

Relatively large improvements in classroom management were observed in CSRP and FOL-Newark, the two sites where this outcome was measured. Based on observers' ratings, teachers in the program groups had more warm and positive interactions and fewer sarcastic and angry interactions and were better able to prevent misbehavior than were teachers in control classrooms. In addition, program group teachers' positive classroom management was sustained one year later in FOL-Newark, where it was studied.

- **Likely because of the improved classroom management, FOL classrooms devoted more time to instruction and other learning activities.**

In FOL-Newark, where this issue was examined, fewer disruptions and more orderly transitions appeared to free up additional classroom instructional time, with FOL classrooms

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Figure ES.2

Summary of Pre-Kindergarten Findings Across Studies: CSRP, FOL-Newark (FOL-N), FOL-Chicago (FOL-C)

Teacher and Classroom Outcomes

Directly Targeted

Positive Classroom Management
CSRP: +
FOL-N: +
FOL-C: NA

Secondary

Classroom Productivity and Amount of Instructional Time
CSRP: NA
FOL-N: +
FOL-C: NA

Quality of Instruction
CSRP: NA
FOL-N: 0
FOL-C: NA

Child Outcomes

Directly Targeted

Problem Behavior
Conflict/Externalizing Behavior Problems (observed)
CSRP: +
FOL-N: +
FOL-C: NA

Conflict/Externalizing Behavior Problems (teacher report)
CSRP: +
FOL-N: 0
FOL-C: 0

Approaches to Learning
Executive Functioning
CSRP: +
FOL-N: NA
FOL-C: +

Attentiveness/Behavior Control
CSRP: +
FOL-N: +
FOL-C: 0

Positive Engagement
CSRP: 0
FOL-N: +
FOL-C: 0

Secondary

Positive Social Behavior (observed)
CSRP: NA
FOL-N: 0
FOL-C: NA

Early Academic Skills
CSRP: +
FOL-N: NA
FOL-C: 0

Social Problem-Solving Skills
CSRP: NA
FOL-N: NA
FOL-C: 0

NOTE: A plus sign (+) indicates that there was a statistically significant impact on that outcome; a zero (0) indicates that there was no statistically significant impact; and "NA" indicates that the outcome was not measured in the given study.

having an average of 10 more minutes of instruction out of a 120-minute observation period. If this was representative of gains achieved every school day, it would translate into 50 minutes more instruction per week, or a week's more instruction over a school year. These improvements are consistent with a central hypothesis of the demonstration: that children with challenging behaviors may divert teachers from providing instruction to all children, and improving teachers' classroom management skills can reduce unproductive time in preschool classrooms.

- **Problem behaviors, such as conflict among children, were generally reduced in the intervention classrooms. In addition, FOL usually improved children's approaches to learning and to executive function skills.**

There is strong evidence that the intervention improved the two child outcomes that it targeted most directly: children's problem behavior and approaches to learning, with effects of moderate size in magnitude. With respect to problem behavior, the intervention reduced children's negative interactions (conflicts) with peers. With respect to approaches to learning, children were observed to be more engaged in the classroom and in tasks of learning. They also did better on tests of executive function, a competence that underlies approaches to learning through a combination of attention, inhibitory control (the ability to control an automatic response), and short-term memory skills.

- **There was not, however, clear evidence that the intervention improved early academic skills.**

The reduction in problem behavior and the positive impact on approaches to learning were not consistently accompanied by positive impacts on early academic skills (for example, identification of letters and the sounds letters make, or ability to demonstrate basic addition and subtraction skills) that have been found to support later achievement in reading and mathematics.

- **The limited data that were collected show no evidence of sustained benefits for children as they make the transition into elementary school. It is not known whether the initial effects on approaches to learning or problem behavior were sustained into the early elementary grades in either site, since data were not collected on those measures specifically.**

Teacher reports and school records of children's academic achievement show no impacts of FOL in kindergarten and first grade. However, rates of grade repetition and special education were simply too low in these early elementary school years to detect

impacts, which may be more likely to occur later. For example, children typically do not complete the process for placement into special education services until at least second or third grade.[8]

Findings on Program Costs

- **At approximately $1,750 per child, FOL represented a 14 percent increase in program costs over normal operating costs in Newark and a 21 percent increase in Chicago.**

Although the average cost per classroom was higher in Chicago ($34,884) than in Newark ($26,873), the larger class size in Chicago meant that the costs per child were similar in the two sites: $1,792 in Newark and $1,744 in Chicago. These costs are higher than they are for the more typical approach of assigning a mental health consultant to multiple classrooms to intervene on an as-needed basis with children who exhibit difficult behaviors. At the same time, the cost of FOL is on a par with other interventions that provide dedicated, routine consultation services to teachers and children.[9]

- **Based on the limited data of early elementary school outcomes for children in the FOL studies, there is no evidence that the program's benefits will outweigh its costs.**

In nonexperimental research, measures of problem behavior and approaches to learning have been shown to be associated with benefits in these and other outcomes in the later school years. However, the limited follow-up data that were collected in the FOL studies did not show evidence that the initial effects on these measures were sustained into the early elementary grades. As noted earlier, it was also too soon to know whether the intervention affected special education placements, although reductions in such placements for even a small number of children would result in major savings that outweigh the intervention's cost.

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[8]National Association of Special Education Teachers, "Introduction to Learning Disabilities," *LD Report* (online publication: www.naset.org/2522.0.html); The IRIS Center, "The Rationale for RTI: Early Intervening and Identification of Learning Disabilities," *Star Legacy Modules* (online publication: http://iris.peabody.vanderbilt.edu/rti01_overview/rti01_04.html).

[9]Florida State University, Center for Prevention and Early Intervention Policy, *Mental Health Consultation in Child Care and Early Childhood Settings: Opportunities to Expand the System of Care for Children with Emotional and Behavioral Challenges in Florida* (Tallahassee, FL: Florida Department of Children and Families, 2006).

Implications for Policy and Research

The CSRP and FOL studies show that a combination of teacher training and in-classroom consultation can improve teacher classroom management practices. FOL also had a positive impact on children's behavior and approaches to learning during the preschool year, and it led to increased classroom instructional time, but there was not clear evidence that FOL improved children's early academic skills. These and other findings from the CSRP and FOL studies suggest the following implications for policy and research:

- **It is important to consider the context in which early childhood programs operate.**

This report illustrates that the FOL intervention was delivered in Newark and Chicago with relatively high dosage, and teachers rated the quality of the professional development highly. However, in these two distinct preschool contexts, differences in the level of resources in Newark and Chicago appeared to affect program implementation, particularly with respect to the focus of in-classroom consultation. A key consideration in programs of this type is the teachers' receptivity to the intervention and the CCCs' ability to engage the teachers in implementing classroom management strategies. Future efforts will need to take into account the level of stress that teachers feel, the resources that are available to them, and the level of support they receive from principals and other administrators.

- **Intensive amounts of consultation may not be necessary to produce measurable changes in teacher practice.**

While multiple studies on the effectiveness of classroom consultation have demonstrated positive effects on teacher practice and child outcomes over and above any effects realized from training alone,[10] research is inconclusive on what the correct amount is for classroom consultation models.[11] The findings from the CSRP and FOL studies suggest that the level of intensity (a six- to seven-hour day, one day per week) and/or the duration of consultation (a full academic year) in this model may not be necessary to produce change in teacher practice; despite the lower level of consultation activities directly related to *The Incredible Years* training content in FOL-Chicago, impacts for children there were on a par with those in FOL-Newark. Important topics for future research include understanding the level and type of in-class consul-

[10]Bruce Joyce and Beverly Showers, *Student Achievement Through Staff Development,* 3rd Edition (Alexandria, VA: Association for Supervision and Curriculum Development, 2002).

[11]Barbara A. Wasik, Shira Kolnik Mattera, Chrishana M. Lloyd, and Kimberly Boller, "Intervention Dosage in Early Childhood Care and Education: It's Complicated," in Tamara G. Halle, Allison J. Metz, and Ivelisse Martinez-Beck (eds.), *Applying Implementation Science to Early Care and Education Programs and Systems: Exploring a New Frontier* (Baltimore, MD: Brookes Publishing Co., in press).

tation that are needed for relatively straightforward models such as *The Incredible Years* as well as for more complicated models.

- **Supporting children's social and emotional competence can have positive impacts but may need to be one part of an overall strategy to strengthen preschool education.**

Improved classroom management and the resulting changes in children's behavior freed up more time for instruction in FOL classrooms. In addition, children in these classrooms might well have been ready and able to take advantage of the increased instruction, since they were more engaged in the tasks of learning and demonstrated greater executive function skills of memory, attention, and inhibitory control. It is possible that these positive results did not have a consistent impact on children's learning because the teachers were not trained sufficiently in the curricula and instructional approaches that are needed to take advantage of any increased opportunity for learning.

In conclusion, the CSRP and FOL interventions presented one approach to improving the quality of preschool education. Continued work in this area is needed to determine the combination of programmatic approaches and educational strategies that will best provide a high-quality preschool experience at scale and will boost long-term outcomes for low-income children.

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About MDRC

MDRC is a nonprofit, nonpartisan social and education policy research organization dedicated to learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

Founded in 1974 and located in New York City and Oakland, California, MDRC is best known for mounting rigorous, large-scale, real-world tests of new and existing policies and programs. Its projects are a mix of demonstrations (field tests of promising new program approaches) and evaluations of ongoing government and community initiatives. MDRC's staff bring an unusual combination of research and organizational experience to their work, providing expertise on the latest in qualitative and quantitative methods and on program design, development, implementation, and management. MDRC seeks to learn not just whether a program is effective but also how and why the program's effects occur. In addition, it tries to place each project's findings in the broader context of related research — in order to build knowledge about what works across the social and education policy fields. MDRC's findings, lessons, and best practices are proactively shared with a broad audience in the policy and practitioner community as well as with the general public and the media.

Over the years, MDRC has brought its unique approach to an ever-growing range of policy areas and target populations. Once known primarily for evaluations of state welfare-to-work programs, today MDRC is also studying public school reforms, employment programs for ex-offenders and people with disabilities, and programs to help low-income students succeed in college. MDRC's projects are organized into five areas:

- Promoting Family Well-Being and Children's Development
- Improving Public Education
- Raising Academic Achievement and Persistence in College
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

Working in almost every state, all of the nation's largest cities, and Canada and the United Kingdom, MDRC conducts its projects in partnership with national, state, and local governments, public school systems, community organizations, and numerous private philanthropies.