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The University of North Carolina  
at Chapel Hill

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UNC

FPG CHILD DEVELOPMENT INSTITUTE

Profession Development &  
Teacher-Child Interactions

# news



## FPG Child Care Director Honored as Employee of the Year

**M**aggie Connolly was named 2007 Employee of the Year by University of North Carolina at Chapel Hill Vice Chancellor for Research and Economic Development Tony Waldrop. Connolly is the director of the child care program at FPG.

The Employee of the Year Award recognizes the outstanding accomplishments of an employee in the Research and Economic Development division. In his nomination letter, FPG Director Samuel Odom said, "The work Maggie does is a major contributor to FPG's success in early childhood research, demonstration, and professional development."

## FPG Scientists Participated in Congressional Briefing

**V**irginia Buysse and Ellen Peisner-Feinberg participated in a Congressional briefing discussing the benefits of Recognition and Response, an early intervention system to identify signs of learning difficulties in pre-K children.

Recognition and Response is a research-based approach to helping teachers and parents respond to signs of learning difficulty in young children as early as ages three or four, before they experience school failure.



## New NECTAC Leadership Appointed

**F**PG Child Development Institute has appointed new leadership for the National Early Childhood Technical Assistance Center (NECTAC). Dr. Lynne Kahn will serve as Co-Principal Investigator and Director, and Dr. Dean Fixsen will serve as Co-Principal Investigator and Co-Director.

NECTAC serves as the U.S. Office of Special Education Program's national resource for states on implementing the Individuals with Disabilities Education Act (IDEA), particularly the early childhood provisions

Dr. Kahn is a 23-year veteran of NECTAC, serving as the Associate Director for Evaluation and since July 2007 as Interim Director. She is the architect of NECTAC's intensive state systems change technical assistance model. She also is the Director of Technical Assistance for the Early Childhood Outcomes Center (ECO).

Dr. Fixsen has spent his career developing and implementing evidence-based programs, initiating and managing change processes, and working with others to improve the lives of children, families, and adults. In addition to co-authoring nearly 100 publications, he has advised local, state, and federal governments. He is also the Co-Director of the National Implementation Research Network and State Implementation of Scaling-up Evidence-based Practices Center.



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## About This Issue

# Connecting Professional Development to Child Outcomes

IN 2001, FPG Child Development Institute launched the National Center for Early Development and Learning (NCEDL). Seven years later, the impact of the findings is still being felt. The early childhood field is reframing how it defines and measures quality early education. And the findings are inspiring new work that redefines how to prepare early childhood teachers who are best able to help children succeed.

This issue of *Early Developments* examines the connections between professional development and child outcomes. It also demonstrates the metamorphosis that takes place when one project meets its original goals and the findings provide the field with much-needed direction on where to go next to best serve young children.

The original NCEDL work was designed to assess the quality of public pre-kindergarten programs. It began at a time when more and more states were funding pre-K, mostly to help children at risk of school failure. Such investments began nationally in 1965 with the creation of Head Start and have continued to grow as research has confirmed the many benefits of attending a quality early childhood program.

The NCEDL work involved assessments of 750 publicly-funded pre-kindergarten classrooms and 2,500 children in 11 different states. At the time, 80 percent of all U.S. children enrolled in publicly-funded pre-kindergarten were being served in those 11 states. The study focused on children's achievement and social competence. It was the first multi-state pre-K study to include extensive classroom observations, child assessments, and kindergarten follow-up. It was intended to provide guidance for state and local public policy-making and for day-to-day practices in schools, centers, and classrooms.

The first analyses presented results on the general overall low quality of pre-K and called into question the regulations states typically use to promote quality. The first

article in this issue discusses how attributes that can be easily regulated such as class size, teacher-child ratios, and levels of teacher education were minimally related to classroom quality. More meaningful were measures that focused on the interactions among teachers, children, and materials. NCEDL revealed that it is high quality interactions between children and teachers that are the active ingredients through which pre-K programs foster the academic, language and social competencies of children.

Improving teacher-child interactions requires continuing and consistent professional development opportunities including ongoing consultation and support for the teacher. The second article, "How Do We Prepare Early Childhood Teachers to Provide Quality Education and Care?" examines efforts to use the Internet to deliver long-term, virtual one-on-one professional development. It uses MyTeachingPartner as a case study on how to meet teachers' needs for ongoing, embedded learning experiences.

Research showing that MyTeachingPartner improved teacher-child interactions laid the groundwork for a major professional development study by the newly created National Center for Research on Early Childhood Education. The last article describes this new work, which seeks to answer the question: Will professional development that leads to improved interactions between teachers and children improve children's success in school?

This issue of *Early Developments* demonstrates that while project names may change, the research itself continues to evolve and influence how we educate young children. The data collected during the NCEDL days are still being analyzed in new ways that will continue to shape best practice for pre-kindergarten.

# How Is Pre-K Quality Measured?

## Findings from NCEDL Suggest New Directions

- Too many classroom settings in state-funded pre-kindergarten programs are of poor to mediocre quality.
- Young children exposed to high quality instructional interactions with teachers in pre-kindergarten programs have higher language, academic, and social performance up to one year later.
- High quality interactions between children and teachers are the active ingredients through which pre-K programs foster the academic, language and social competencies of children.

**T**HESE FINDINGS from the National Center for Early Development & Learning's (NCEDL) Multi-State Study of Pre-Kindergarten paint a picture of both challenge and hope. At first glance they suggest that the pre-kindergarten programs which were created as an intervention to help our most vulnerable children succeed in school are struggling to be up to the task. But a closer look reveals where the problems lie and how to go about fixing them. The picture is far from bleak. The findings demonstrate that when done well, pre-kindergarten programs make a real difference in preparing young children for school. And the results identify specific criteria that contribute to these high quality experiences.



### Defining and Regulating Quality

There is a growing body of evidence that high quality experiences in early education classrooms directly benefit children, but translating the evidence into effective policy is a daunting task. “Policymakers are interested in creating pre-kindergarten programs of the highest quality and with the greatest positive impact on children’s developmental outcomes, but they are faced

with questions about what to try to regulate and where to invest finite resources,” said Robert Pianta, director of the National Center for Research on Early Childhood Education (NCRECE). “These decisions should be guided by research evidence.”

Policymakers, parents, and teachers need concrete means to define and assess quality if they are to create and participate in programs that ultimately improve children’s success in school—the goal behind much of the effort to develop and expand these programs.

The field of early childhood education defines two types of quality—structural and process. Structural quality includes attributes such as maximum class size, teacher-child ratios, and minimum levels of teacher education. Process quality measures focus on the interactions among teachers, children, and materials—features that can be hard to quantify, but are recognized as a key component of children’s experiences.

NCEDL researchers studied structural and process quality in a large sample of state-funded pre-kindergarten programs. They came to the conclusion that teachers' interactions with children are generally more important to the children's positive learning and development than structural characteristics of the classroom. The design of the study and the three questions addressed by this group are summarized below.

### **Multi-State Pre-K Study Design**

Hundreds of pre-kindergarten classrooms in 11 states participated in the NCEDL study. Researchers randomly sampled classrooms in each state and randomly selected children within each classroom. The 11 states in which the study was

conducted accounted for nearly 80 percent of the state-funded pre-kindergarten programs in the United States at the time.

Teachers were interviewed and each classroom was observed multiple times across the school year. Observational measures included the *Early Childhood Environment Rating Scale-Revised (ECERS-R)* and the Classroom Assessment Scoring System (CLASS). The ECERS-R gives a picture of the



activities and materials in a classroom and the way that teachers interact with children. The CLASS focuses exclusively on teachers' social and instructional interactions with children. Both measures include elements of process quality.

In order to determine which features of pre-kindergarten experiences are most important for young children, the children's language, math, cognitive, and social outcomes were assessed at the beginning and end of pre-kindergarten and again in kindergarten.

### Process and Structural Quality

Using data from the NCEDL study, researchers compared the benefits of policies that defined the quality of pre-kindergarten programs by either structural or process features. As described previously, structural features included characteristics such as class size, teacher-child ratios, and levels of teacher education. Process features were defined as "observable social and instructional interactions that children experience directly with teachers in the classroom."

They found that none of the recommended minimum standards of structural quality were directly related to children's development of receptive language (words they understood), expressive language (words they were able to use), rhyming, problem solving, letter naming or behavior. Yet, each dimension of process quality examined was associated with at least one area of development. Children learned best when teachers' interactions promoted conceptual development and offered feedback on children's learning. Children showed significantly larger gains in language and social development when they experienced higher quality instruction or more responsive and sensitive interactions with teachers.

The findings suggest that state-

funded pre-kindergarten programs and policies should not rely on structural features alone to promote development. High quality interactions between children and teachers are the active ingredient through which pre-K programs foster the academic, language and social competencies of children. In fact, the evidence suggests that when state policy *only* focuses on structural features, pre-kindergarten programs may fall short of their potential for facilitating children's development.

### Does Process Quality Produce Lasting Outcomes?

A second study using NCEDL data sought to determine if the benefits produced by high quality interactions between children and teachers continued to predict children's language, academic, and social outcomes after they left pre-kindergarten and neared the end of kindergarten.

In short, they did. Children who experienced more responsive social interactions in pre-kindergarten and who had pre-kindergarten teachers who supported cognitive development and scaffolded learning were performing better than their kindergarten peers who did not have these experiences. Specifically, children scored higher on language when they attended pre-kindergarten classrooms rated higher on the CLASS. They scored higher on reading skills in classrooms rated higher on the ECERS-R and CLASS. In addition, children whose mothers had less education were rated by kindergarten teachers as having more social competence and fewer behavior problems if they had attended a higher quality pre-kindergarten classroom.

"We found that children showed higher language and reading skills at the end of kindergarten when their pre-K teachers provided instruction

that was at the appropriate skill level for the children and encouraged children to develop their thinking abilities. Children's language and reading skills were also higher when teachers provided ongoing, specific feedback that allowed children to understand which skills they had mastered and provided assistance and encouragement to master new skills," said Peg Burchinal, senior scientist and director of data management core at FPG.

### Do Programs Measure Up?

In a third study using the NCEDL data, researchers used the CLASS to create typologies of classrooms. Teachers could be considered high or low on emotional support and high or low on instructional support, as measured by the CLASS.

Of the classrooms studied, only 15 percent fell into the highest quality, defined as being high on both support factors. These classrooms showed consistent social, emotional and instructional support to children. The largest percentage of classrooms (31) had a positive emotional climate, but were of mediocre instructional quality. Unfortunately, almost 20 percent of classrooms were of very poor quality, with especially low ratings on instructional supports (below 2 on a 7-point scale).

Between 40 and 50 percent of classrooms had instructional quality below levels consistent with producing academic gains. From the standpoint of regulation, perhaps the most important finding of this study is that the highest and lowest quality classrooms did not differ on regulated features of programs like teacher education/certification, number of children in class, teacher-child ratio, or whether or not the

class was located in a public school—a finding that reaffirms that simply regulating these program features is insufficient to ensure high quality programs.

### Shifting the Focus to Process Quality

The consistent take-away message from NCEDL research is that program policies and regulations that target teachers' development of high quality emotional and instructional interactions with children may effectively lead to improved developmental outcomes for children who attend state-funded pre-kindergarten programs.

“Policy-related discussions about pre-kindergarten program quality tend to focus on the minimum standards related to structural features. These results provide little evidence that minimal structural quality standards were related to children’s development of academic, language or social skills during pre-kindergarten,” Pianta said “Instead, focus should be on improving interactions between teachers and children through professional development that is active, collaborative,

embedded within a classroom context and part of school culture. These may be the most effective and direct avenues to improve the outcomes of children who attend state pre-K programs.”

Most states now have some form

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High-quality interactions between children and teachers are **the active ingredient** through which pre-K programs foster the academic, language and social competencies of children.

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of publicly-funded pre-kindergarten. These programs are an imperative first step in preparing children to succeed in school and ultimately to improve their lives as they age into adulthood. To ensure that these programs are able to meet their intended goals, policy-makers and administrators will need

to turn their attention to finding new and effective ways to support *teachers'* development of interactional skills.

“The skills teachers need to create positive early childhood environments develop over time and need ongoing support,” said Carollee Howes, professor at the University of California at Los Angeles. “Efforts to provide training and professional development that focus directly on raising the quality of instructional and socio-emotional interactions in such classrooms are sorely needed. Professional development needs to be intensive, sustained and classroom focused.” |ed|

#### To Learn More

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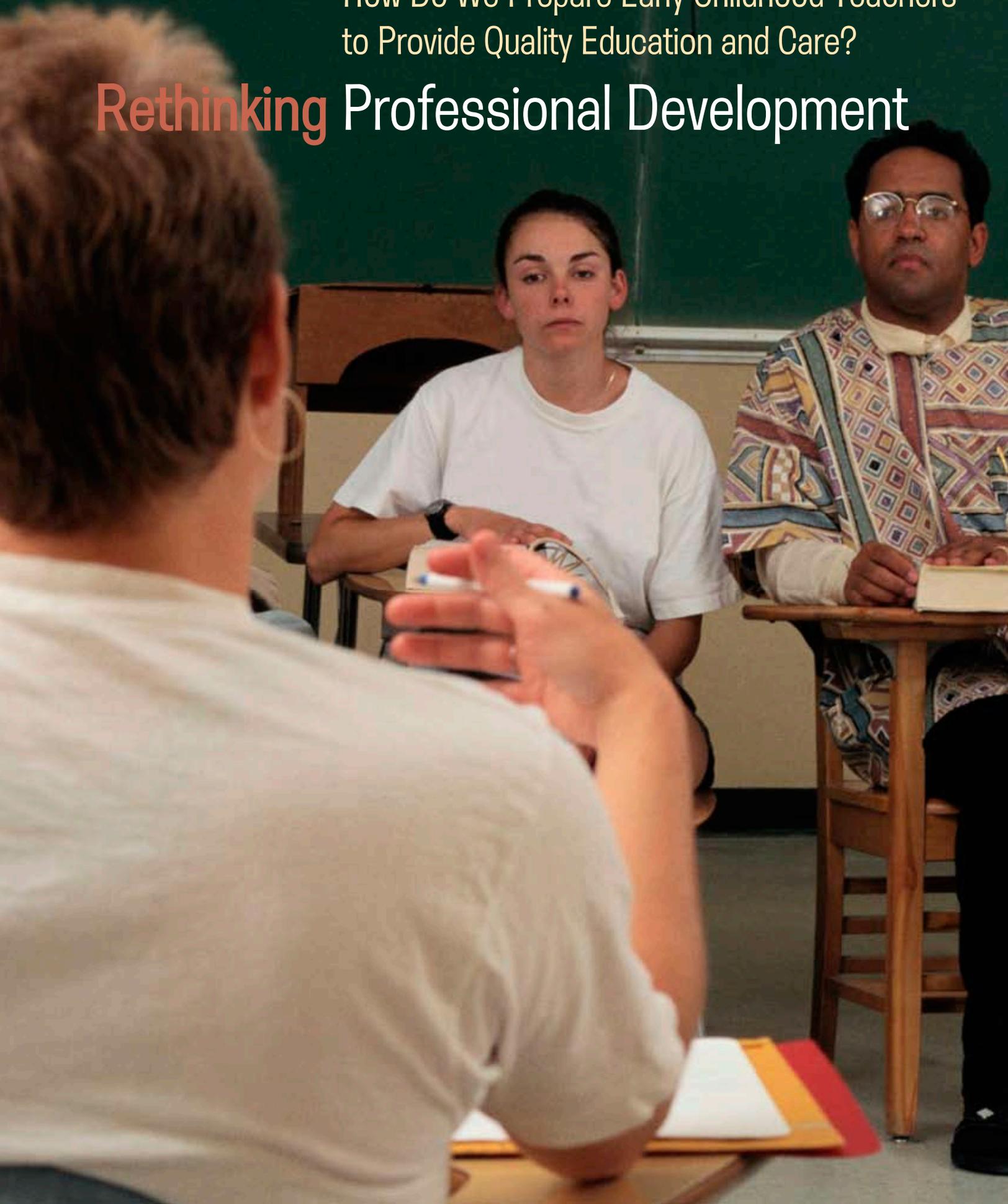
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How Do We Prepare Early Childhood Teachers  
to Provide Quality Education and Care?

# Rethinking Professional Development



**P**ROFESSIONAL DEVELOPMENT is at a turning point.

First, the traditional workshop model has been found to be largely ineffective. Teachers often describe the content as vague and irrelevant. Because ongoing follow-up is not built into such efforts, whatever may be gained from the workshop itself is usually lost once teachers return to the classroom. Yet, in a survey of 1,000 pre-K teachers, 79 percent said that they had attended a workshop during the academic year, while only 5 to 16 percent reported opportunities for more active learning.

Second, No Child Left Behind includes a mandate for high standards for professional development to promote research-based, effective practice in the classroom. In fact, funds provided under NCLB for professional development may not be used for one-day or short-term workshops or conferences.

Third, the number of teachers who will need support is rapidly growing. FPG researchers Dick Clifford and Kelly Maxwell estimate that it will take more than 200,000 teachers if a voluntary pre-kindergarten program were offered nationwide to all 4-year-olds. That is a dramatic increase from the current cadre of 27,000 qualified early childhood teachers. Professional development tools will need to be effective in large scale efforts to prepare this workforce and to best serve at-risk children.

Last, technology is offering a new means of interacting with teachers. Costs have decreased enough that it is conceivable that most programs could have at least one computer. And broadband connections now allow large amounts of data, such as video, to travel at high speeds. These capacities open the way for innovative models of professional development that can reach individuals and groups of teachers at a distance and on demand.

This combination of factors offers

both opportunities and challenges for professional development. Fortunately, technology has advanced to the point that it may be able to meet demands to “scale-up” efforts to reach a dramatically larger number of teachers in a more sustained manner.

### Scaling Up

The need to provide effective professional development to larger numbers of teachers comes at a time when research is providing new insights into what classroom features work best for young children.

As noted in the previous article, “How Is Pre-K Quality Measured?” we now understand the importance for programs to improve teachers’ emotional and instructional interactions with children so as to improve children’s developmental outcomes. Recent work building from NCEDE suggests that developing skills to improve teacher-child interactions requires continuing and consistent professional development opportunities—in other words, ongoing consultation and support for the teacher.

The traditional model of on-site consultation is a costly endeavor. Time and travel costs quickly add up. Typically, teachers are left with sporadic and inconsistent support, making the effort ineffective. In addition, providing face-to-face consultation to 200,000 teachers would require a much larger professional development workforce than currently exists.

To overcome these challenges, researchers from NCEDE and the new National Center for Research on Early Childhood Education (NCRECE) are beginning to examine the Internet as a promising vehicle to deliver long-term, virtual one-on-one professional development opportunities. One such model is examined here to provide a concrete example of the transformation that is taking place.

CLASS measures ten features of teacher-child interactions related to children’s skill development.

1. Positive climate: The emotional tone of the classroom and the connection between teachers and students.
2. Negative climate: Level of expressed negativity in the classroom between teachers and students.
3. Teacher sensitivity: Teachers’ responsiveness to students’ needs and awareness of students’ level of academic and emotional functioning.
4. Regard for student perspectives: Teachers’ encouragement of children’s autonomy and choice.
5. Behavior management: Teachers’ ability to use effective methods to prevent and redirect misbehavior.
6. Productivity: Teachers’ ability to manage instructional time and routines to maximize time for learning.
7. Instructional learning formats: The degree to which teachers maximize students’ engagement and ability to learn by providing interesting activities, instructions, centers, and materials.
8. Concept development: The degree to which instructional discussions and activities promote students’ higher-order thinking skills.
9. Quality of feedback: Evaluates teachers’ ability to provide feedback focused on expanded learning and understanding.
10. Language modeling: The quality and amount of teachers’ use of language-stimulation and language facilitation techniques in all interactions with children.

## MyTeachingPartner

Researchers at the University of Virginia's Curry School of Education have drawn from their work on NCEDL to develop a web-based professional development model called MyTeachingPartner (MTP) ([www.myteachingpartner.net](http://www.myteachingpartner.net)). MTP provides teachers with online, individualized support and an online consultant—a teaching expert who assists teachers through observation, discussion, and regular feedback. It also provides a library of video-based examples of high quality teacher and child interactions with detailed explanations of what the teacher is doing effectively. Teachers share videotape of themselves providing literacy, language, and self-regulation instruction. The tapes are produced bi-



weekly. Together, the teacher and consultant discuss the video through the lens of the Classroom Assessment Scoring System (CLASS), which is also the framework for the Web-based library.

The activities the teachers videotape are from a curricula provided by MTP that focuses on language and literacy skills, and the development of healthy child-teacher relationships. Teachers engage children in these lessons four times each week.

MTP also provides several Web-based resources, such as lesson plans and video demonstrations of effective practice taken from actual classrooms. For example, a lesson

designed to teach children to recognize the letters in their name, recite part of the alphabet, and identify common letters includes a detailed script of the activity, research rationale, steps for integrating the activity into other pre-kindergarten curricula and video demonstrations. One video shows a teacher chanting the ABCs with a small group. She pays special attention to the breaks in the alphabet by having children clap for certain letters, and she paces the activity in a sensitive and encouraging manner. As she is singing, she points to the letters, highlighting the printed letter and the letter name. This builds children's awareness of the printed letter and letter name correspondence.

The design of MTP is based on research that demonstrates effective methods of teaching adult learners as well as teachers' actual needs. Researchers consulted with teachers, educational experts, and Web specialists. They enlisted teachers in testing the prototype which led to revisions and the current product.

A two-year evaluation trial of MTP was recently completed with 245 pre-kindergarten teachers in Virginia. All participants taught in state-funded pre-kindergarten classrooms that served high risk children. As a result, 5,250 children had teachers receiving some form of ongoing professional development. Teachers were randomly selected either to fully participate in MTP, receiving ongoing consultation and access to Web resources; to have access only to Web resources without consultation services; or to have access only to documents with no access to video demonstrations, consultant services or classroom materials.

In addition, four children from each class were randomly selected to be followed through the study. They were assessed before teachers began participating in MTP and will be assessed again at the end of the second year. Children were assessed on language and literacy. Videotaped observations provided information on social relationships and self-regulation. As the children entered kindergarten, their teacher completed questionnaires assessing language, literacy and social relationships.

Initial findings from the videotaped teacher-child interactions indicate that teachers receiving consultation made greater improvements in the quality of their interactions with children over the first year than did teachers engaged only in the Website. This difference was particularly evident in teacher sensitivity, instructional learning formats, and language modeling. It is noteworthy that, to date, the benefits of the consultation were even more pronounced in classrooms with larger numbers of children living in poverty; and that even in the Web-only group, where teachers could view videos of effective interactions, early career teachers showed improvements.

The study also countered the conventional wisdom that teachers balk at being observed. While teachers noted that the videotaping process could be challenging, they all provided video on a regular biweekly basis. And they agreed that the process was beneficial. The vast majority said that MTP provided added value to their teaching practice and helped them to understand and interact more effectively with children in their classroom.

“I would say this is the best professional development opportunity that I have had in my 23 years of teaching,” one participant said.

Another added, “My children’s assessment scores have never been higher.”

## The Bigger Picture

MTP is one example of how professional development can adapt to meet teachers’ needs for ongoing, embedded learning experiences. However, the findings discussed above have implications beyond MyTeachingPartner.

First, the evaluation shows that it is feasible to provide ongoing, Web-based support and feedback focused on teacher-child interactions.

Second, it suggests that efforts that are video-based, individualized, and skill-focused hold promise as effective professional development approaches.

Third, teachers benefit from having access to examples that demonstrate quality practice in the classroom and receiving regular feedback. The quality of their instruction improves from such interventions. Teachers benefit from observing their own and others effective interactions.

Last, teachers in classrooms with the highest concentrations of children living in poverty benefited the most from more intensive, focused and individualized intervention. Given that public pre-kindergarten programs are designed to prepare at-risk children—many of whom live in poverty—for school, these programs may require such intense professional development support in order to achieve their goal.

These results provided the groundwork for a major professional development study now underway with funding from the Institute of Education Sciences at the U.S. Department of Education. The next article describes the new study being conducted by the National Center for Research on Early Childhood Education (NCRECE). |ed|



## To Learn More

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# How Do We Know What Works?

## Making the Connection Between

### What we know . . .

- A** High quality interactions between children and teachers in pre-K programs contribute to academic, language, and social competencies in children.
- B** Professional development efforts that focus on observations of effective teacher and child interactions, and are video-based, individualized, and skill-focused, hold promise as effective approaches to creating high-quality interactions between children and teachers on a large scale.

### What we need to know . . .

Is there a direct link between A and B? Will professional development that leads to improved interactions between teachers and children also lead to children's success in school?

Leveraging the value of publicly-funded pre-kindergarten programs requires that research and development efforts focus on identifying effective and replicable approaches to teacher training that produce positive, and even accelerated, gains in children's academic performance.

Unfortunately, like nearly every other form of teacher training, there is virtually no evidence linking specific professional development experiences to child outcomes. Policy leaders and decision-makers need such information to make informed decisions about which training methods to pursue and in which to invest.

The National Center for Research on Early Childhood Education (NCRECE) was established to tackle these issues.

Education and FPG Child Development Institute are partnering with colleagues at The University of North Carolina at Greensboro and the University of California at Los Angeles.

The Center will compare the impact on teacher and child interactions and on child outcomes of two professional development supports: (1) a college-level course focusing on teacher and child interactions, and (2) on-going, individualized consultation. It is one of a few large-scale, randomized, controlled experiments of different forms of professional development for early childhood teachers.

Researchers are working with 450 pre-kindergarten teachers in Chicago,

## Professional Development and Child Outcomes

Supported by a \$10 million grant from the U.S. Department of Education's Institute of Education Sciences, NCRECE investigates what works and what does not work when it comes to early childhood teacher training. It will determine whether new methods for training preschool teachers result in children, especially disadvantaged children, learning language and literacy skills better.

NCRECE is an outgrowth of the work done by the National Center for Early Development & Learning (NCEDL). In this next phase, researchers from the University of Virginia's Curry School of

Hartford (Connecticut), New York City, and other large early childhood education programs. These areas serve a very diverse population of young children.

Teachers have been randomly assigned to one of four study groups, where they will:

- Participate in the course and then receive consultation,
- Only participate in the course,
- Only receive consultation, or
- Serve as a control group that receives only the typical forms of professional development support.

The sample of teachers is diverse with respect to age, race, and socio-economic status. Children between ages 3 and 5 have been randomly selected from these teachers' preschool classrooms. Children also are diverse with respect to gender, language and cultural background, race, and socio-economic status, although on average they reflect less-advantaged socioeconomic backgrounds.

All teachers, regardless of study group, have received a video camera, tripod and stipend. In addition, they are being asked to:

- Complete questionnaires twice each year,
- Periodically videotape themselves teaching a lesson,
- Provide feedback related to the course and consultation (if applicable),
- Distribute consent forms to families of their students in fall 2008, and
- Allow NCRECE research staff to assess four randomly selected children from their classes.

### The Course

Selected teachers are participating in a course designed by NCRECE. All will receive three college credits or certification units for successfully completing the coursework.

The course was completed during the spring 2008 semester. It was an intensive, skill-focused, and field-based experience. Teachers learned how language and literacy develop, how teacher and child interactions in early education settings influence language development and learning, and how high quality implementation of language and literacy curricula and activities leads to skill growth. By the end of the semester, they should have been able to identify behavioral indicators of high quality/effective teaching using the CLASS as the basis for observation and to identify such indicators in their own and others' teaching.

Video played a significant role in the



course. Teachers watched model classroom demonstrations. These were used to discuss specific examples of interactions so that students better understood the effects of nuances, such as tone of voice, verbal feedback and emotional dimensions, and to trace the richness of vocabulary and language used.

The objectives for participants included:

- Identifying specific, effective behaviors and interactions in the practice of other teachers and in their own teaching;
- Identifying how to intentionally make use of interactions as instructional opportunities; and
- Learning to target opportunities related to children's language and literacy skills.

### One-on-One Consultation

Following the course, teachers were assigned randomly to receive consultation during the 2008–2009 school year. The consultation group also will include teachers who did not take the course and were randomly assigned to receive consultation only. The consultation will be modeled after MyTeachingPartner (MTP) (see article on page 10). Like MTP, it will provide observationally-based, practice-focused support and feedback for teachers through Web-mediated consultation, this time provided by local consultants trained in the MTP approach.

The objectives for teachers include:

- Becoming better observers of their own and others' practice,
- Using their observations to evaluate the quality of their instruction and interactions,
- Having clear intentions for what they are teaching and how they are interacting,
- Feeling more effective in their interaction, and
- Increasing the quality of their interactions with students.

## Learning More

The data from the NCEDL Multi-State Pre-Kindergarten Study plays a double role in NCRECE's work. First, the original findings from NCEDL provide the foundation for which the research just described is based. Second, NCEDL data, along with other multi-state datasets, will be analyzed as part of ongoing research efforts to further examine links between quality and child outcomes.

Researchers will review the data from the NCEDL Multi-State Pre-Kindergarten Study and the Study of State-Wide Early Education Programs (SWEEP). Outcomes will be analyzed to determine whether change over time is greater for students in:

- Universal or targeted programs;
- Very short, half-day or full-day programs;
- Programs located on school properties or not;
- Programs that require a teacher to have a BA or not; and
- Programs with single or blended funding sources.

Researchers will examine if these characteristics are related to gains for at-risk or not at-risk students. When differences are detected, classroom quality data will be examined to determine if those differences can be accounted for by teacher sensitivity and responsiveness, instruction/implementation, or classroom activities and practices.

## Results

Without the type of research being done by NCRECE, the proliferation of state-funded pre-kindergarten programs will never achieve their intended purpose of eliminating the considerable achievement gap at the start of school between at-risk children and their peers.

It's not enough to have children in a pre-kindergarten program. They need

to be in a pre-kindergarten that helps them be better prepared for school. To do that, children need teachers who are qualified in the skills that produce such results, and that means they need to participate in effective professional development.

As of now, effective is a loosely defined term when it comes to professional development for early childhood teachers. NCRECE seeks to hone that definition so that young children are prepared to succeed. |ed|

## To Learn More

<http://www.fpg.unc.edu/~ncedl/>

[www.ncrece.org](http://www.ncrece.org)



# Recently Awarded Grants

## National Center to Showcase New Approach to Professional Development

Funded by a \$2.5 million grant from the U.S. Department of Education's Office of Special Education Programs, CONNECT: The Center to Mobilize Early Childhood Knowledge will work with the early childhood community to create a series of Web-based resources that focus on and respond to challenges faced each day by those working with young children with disabilities and their families.

Guided by the needs of the field, CONNECT will develop specific content and instructional strategy modules. Each module will include audio and video clips demonstrating effective practices and family perspectives, sample professional development activities, opportunities for ongoing discussion, and more. All content will be informed by the best available research and evidence-based knowledge from families and practitioners.

Module topics will be determined based on the needs of faculty and other professional development providers, administrators, and families. CONNECT will begin its work by seeking input from each group about where skill development is needed most.

CONNECT's approach to developing modules departs from the typical "we create, you use" mode of operation. Instead, modules will be developed with constant feedback, testing, and refining based on people's experiences. The flow of knowledge must be two-way and ongoing— a notion that serves as a core value of this work.

The collaboration fostered in the needs assessment will be a driving force throughout the work. CONNECT will create an online community to ensure that each aspect of the project is responsive to those working with young children. This effort will create guidelines to support the creation of professional development materials that are standards-based, strongly rooted in an evidence-based practice framework, and easily adaptable to the needs of multiple audiences and contexts, with strong evaluation components linked to policies, resources, and practices.

**For more information, visit**  
<http://community.fpg.unc.edu/connect>

**Additional grants  
and sub-contracts  
awarded since  
the last issue of  
*Early Developments***

## **FPG Projects Awarded Dropout Prevention Grant**

The North Carolina Committee on Dropout Prevention awarded FPG Child Development Institute \$126,651 toward an intervention program that will target boys of color in pre-kindergarten through third grade. The program will engage six schools that will participate in a year long effort aimed at improving relationships and instructional strategies for boys of color. It is a joint effort between two FPG projects—FirstSchool and Promoting Academic Success for Boys of Color (PAS)—and the NC Ready Schools Initiative.

**For more information, visit**

[www.ncpublicschools.org/newsroom/news/2007-08/20080123-01](http://www.ncpublicschools.org/newsroom/news/2007-08/20080123-01).

### **All Women: Education, Screening, Mammograms**

**Funder:** Susan G. Komen Foundation,  
NC Triangle Affiliate

**Principal Investigator:** Karen Luken

**Duration:** 4/01/2008 to 3/31/2009

The project provides education and breast cancer screening services to women with intellectual disabilities in five NC counties and education to their caregivers, mammography technologists and healthcare workers.

### **Choices of Care Among Latino Families in the New South**

**Funder:** US Department of Health and  
Human Services

**Principal Investigator:** Dina Castro

**Duration:** 9/30/2007 to 9/29/2010

FPG will explore how Latino families choose care for preschool children and how they define quality. Researchers will gather data from 450 families in North Carolina. In addition, they will collect program information and observe practices in 120 child care programs.

### **Evaluation of Project CLICK**

**Funder:** ZERO TO THREE

**Principal Investigator:** Noreen Yazejian

**Duration:** 9/01/2007 to 8/31/2010

Project CLICK will provide ongoing, comprehensive, research-based professional development for early childhood educators serving children from low-income families in Eastern Kentucky. FPG's evaluation of the project will examine changes in teacher knowledge, classroom practices, and children's developmental outcomes with a randomized control, longitudinal design.

### **Evaluation of Smart Start Family Support and Health Grant Options**

**Funder:** NC Partnership for Children

**Principal Investigator:** Kelly Maxwell

**Duration:** 12/01/2007 to 6/15/2009

This project is evaluating three Smart Start grant programs supporting children's health in child care programs, family literacy, and parenting practices.

### **Evaluation of Summer Treatment Program for Children with Disruptive Behavior Disorders**

**Funder:** National Institutes of Health, US Department of Health and Human Services

**Principal Investigator:** Michael Willoughby

**Duration:** 10/01/2007 to 9/30/2008

This project evaluates whether the efficacy of the Summer Treatment Program, an evidence-based treatment model for children with disruptive behavior disorders, varies as a function of individual differences in children's callous-unemotional traits.

### **FirstSchool Product Development**

**Funder:** Foundation for Child Development

**Principal Investigator:** Kelly Maxwell

**Duration:** 11/01/2007 to 10/31/2008

FirstSchool is an initiative to create a new vision for the education and care of young children from pre-kindergarten

through third grade that unites the best of early childhood, elementary, and special education. Under this grant, web-based products related to FirstSchool and PK-3 education will be developed.

### **Georgia Early Care and Education Quality Systems**

#### **Indicators Evaluations**

**Funder:** Bright Start Georgia

**Principal Investigator:** Kelly Maxwell

**Duration:** 9/01/2007 to 6/30/2008

The project refines and develops tools to measure early childhood quality indicators, field tests the measures, and gathers data to better understand the quality of early childhood education for the Georgia Department of Early Care and Learning.

### **Recognition and Response Observation and Rating Scales Manual**

**Funder:** National Council Learning Disabilities

**Principal Investigator:** Mary Ruth Coleman

**Duration:** 1/01/2008 to 10/31/2008

The Recognition and Response Observation and Rating Scale (RRORS) is a screening tool to help early childhood teachers and parents recognize early signs of learning difficulty in children from three to five years of age. The RRORS Manual will provide background information on the administration and development of the RRORS and its role in the Recognition and Response system.

### **Rhode Island BrightStars Evaluation**

**Funder:** Rhode Island Kids Count

**Principal Investigator:** Kelly Maxwell

**Duration:** 3/01/2008 to 11/30/2010

FPG will study the new quality rating system for early learning and child care programs, BrightStars. This project will assist Rhode Island's early childhood leaders better understand the quality of early childhood education in their state and

refine and finalize the quality rating system before it is implemented statewide.

### **SpecialQuest Birth-Five: Head Start/Hilton Foundation Training Program for Inclusion of Young Children with Disabilities and Their Families**

**Funder:** Napa County Office of Education

**Principal Investigators:** Sam Odom and Shelley deFosset

**Duration:** 10/01/2007 to 9/30/2010

FPG will work in partnership with the Napa County Office of Education to implement the Head Start/Hilton Training Program (SpecialQuest). The project will build on the learnings from ten years of implementing the SpecialQuest project with Early Head Start Programs across the country. SpecialQuest will work intensely with ten states to develop a collaborative state-wide training plan to support inclusive early childhood services.

### **Technical Assistance to Nevada to Meet the Federal Requirements Under the Individuals with Disabilities Education Act**

**Funder:** Nevada Department of Health and Human Services

**Principal Investigators:** Sam Odom and Lynne Kahn

**Duration:** 8/23/2007 to 6/30/2008

This project focuses on early intervention practices and measuring early childhood outcomes. Staff will provide child outcomes training to improve inter-rater reliability in completing the Child Outcomes Summary Form and guidance on developing quality assurance strategies for child outcomes.



## FPG Receives \$12.8 Million Grant to Continue Rural Life Study

The National Institutes of Health has awarded a \$12.8 million grant to FPG and the UNC School of Education to continue the largest study to date of how rural life affects child development.

Launched five years ago, the Family Life Project has been following families living in two of the four major geographical areas of high child rural poverty—the African-American South and Appalachia. Researchers have followed 1,292 children from birth in three counties in Eastern North Carolina and three counties in Central Pennsylvania. This second phase of the project will follow these children as they enter school.

“Even though more than half of all poor children live in rural areas, most of the research about children living in poverty is based on studies of urban children. Therefore, policies designed to help children living in poverty may not best meet the needs of those living in rural areas,” said Lynne Vernon-Feagans, the study’s principal investigator and FPG fellow. “Our findings will have important implications for local and national policies and the services most needed by rural families.”

For example, geographic isolation is a condition unique to rural living, said Vernon-Feagans, Ph.D., who also is William C. Friday Distinguished Professor of Early Childhood, Intervention and Literacy in UNC’s School of Education and a professor of psychology in the College of Arts and Sciences.

The first phase of the Family Life Project found that isolation was related to family dynamics: Mothers had less instability with a partner but worked more hours per week; many families had

to travel long distances to work and childcare, which often led to poorer child outcomes although positive parenting helped to offset these negative effects on children.

As the project moves forward, researchers will focus on three areas to see how children living in rural poor communities transition to school. In the first, researchers will examine whether an infant’s and toddler’s temperament predicts early school success or failure. Temperament was assessed in the first three years of each child’s life with physiological measures of saliva cortisol by measuring stress hormones in the children’s saliva and heart-rate, as well as home observations.

Second, researchers will examine for the first time in rural, low-income communities how academic achievement is affected by language and cognitive skills and experiences before formal schooling, the nature and quality of the classroom instruction in the early grades, parenting experiences and outside school activities.

“This second phase of the Family Life Project will be important in understanding how the early experiences of young children in rural communities predict children’s academic and behavioral success in school,” Vernon-Feagans said. The Family Life Project began in 2002 with a \$16.5 million grant from the National Institute of Child Health and Human Development at the National Institutes of Health. This second grant is for five years.

For more information about the Family Life Project, visit [www.fpg.unc.edu/~flp/](http://www.fpg.unc.edu/~flp/).

# Recently Published

FPG research is published in the most respected journals and publications in the field. Below we highlight select articles.

A complete list of recent citations can be found at

[www.fpg.unc.edu/products/cite\\_search.cfm](http://www.fpg.unc.edu/products/cite_search.cfm).

## Technology Stereotypes Broken When Children's Health Involved

<http://www.fpg.unc.edu/~snapshots/snap52.pdf>

In some cases, extenuating circumstances, such as health conditions, increases. Internet use among those with lower incomes and educations. A study of mothers of children with genetic disorders found that the Internet served as a major resource in parents' quests for diagnosis, prognosis, treatments, services, and supports.

Schaffer, R., Kuczynski, K., & Skinner, D. (2008). Producing genetic knowledge and citizenship through the Internet: Mothers, pediatric genetics, and cybermedicine. *Sociology of Health & Illness*, 30(1), 145-159.

## How Does Fragile X Syndrome Affect Speech and Language Skills?

<http://www.fpg.unc.edu/~snapshots/snap51.pdf>

Recent articles by FPG researchers in several journals explore different facets of communication in boys with fragile X syndrome (FXS), boys with FXS and autism, boys with Down syndrome, and boys developing typically.

Price, J. R., Roberts, J. E., Hennon, E. A., Berni, M. C., Anderson, K. L., & Sideris, J. (in press). Syntactic complexity during conversation of boys with fragile X syndrome and Down syndrome. *Journal of Speech, Language, and Hearing Research*.

Roberts, J. E., Chapman, R. S., & Warren, S. F. (Vol. Eds.). (2008). *Communication and language intervention series: Speech and language development and intervention in Down syndrome and fragile X syndrome*. Baltimore: Brookes.

Price, J., Roberts, J., Vandergrift, N., & Martin, G. (2007). Language comprehension in boys with fragile X syndrome and boys with Down syndrome. *Journal of Intellectual Disability Research*, 51(4), 318-326.

Roberts, J. E., Hennon, E. A., Price, J. R., Dear, E., Anderson, K., & Vandergrift, N. A. (2007). Expressive language during conversational speech in boys with fragile X syndrome. *American Journal on Mental Retardation*, 112(1), 1-17.

Roberts, J., Martin, G. E., Moskowitz, L., Harris, A. A., Foreman, J., & Nelson, L. (2007). Discourse skills of boys with fragile X syndrome in comparison to boys with Down syndrome. *Journal of Speech, Language, and Hearing Research*, 50, 475-492.

Roberts, J. E., Price, J., Barnes, E., Nelson, L., Burchinal, M., Hennon, E. A., et al. (2007). Receptive vocabulary, expressive vocabulary, and speech production of boys with fragile X syndrome in comparison to boys with Down syndrome. *American Journal on Mental Retardation*, 112(3), 177-193.

Roberts, J. E., Price, J., & Malkin, C. (2007). Language and communication development in Down syndrome. *Mental Retardation & Developmental Disabilities Research Reviews*, 13(1), 26-35.

Barnes, E. F., Roberts, J. E., Mirrett, P., Sideris, J., & Misenheimer, J. (2006). A comparison of oral structure and oral-motor function in young males with fragile X syndrome and Down syndrome. *Journal of Speech, Language, and Hearing Research*, 49(4), 903-917.

Zajac, D. J., Roberts, J. E., Hennon, E. A., Harris, A. A., Barnes, E. F., & Misenheimer, J. (2006). Articulation rate and vowel space characteristics of young males with fragile X syndrome: Preliminary acoustic findings. *Journal of Speech, Language, and Hearing Research*, 49, 1147-1155.

Roberts, J. E., Long, S. H., Malkin, C., Barnes, E., Skinner, M., Hennon, E.A., et al. (2005). A comparison of phonological skills of young males with fragile X syndrome and Down syndrome. *Journal of Speech, Language, and Hearing Research*, 48, 980-995.

### **Preschoolers Benefit from Mental Health Screening**

<http://www.fpg.unc.edu/~snapshots/snap50.pdf>

A new study by FPG researcher Oscar Barbarin demonstrates that preschoolers can benefit by a simple and inexpensive mental health screening process designed to flag potential signs of more serious problems.

Barbarin, Oscar A. (2007). Mental health screening of preschool children: Validity and reliability of ABLE. *American Journal of Orthopsychiatry*, 77(3), 402-418.

### **Crossing the Language Divide**

<http://www.fpg.unc.edu/~snapshots/snap49.pdf>

A case study published in the August 2007 issue of the *Early Childhood Education Journal* by FPG investigator Christina Gillanders demonstrates how English-speaking prekindergarten teachers can cross the language barrier to build positive relationships with English language learners.

Gillanders, C. (2007). An English-speaking prekindergarten teacher for young Latino children: Implications of the teacher-child relationship on second language learning. *Early Childhood Education Journal*, 35(1), 47-54.

### **Caregiver Well-Being Affects Academic Achievement**

<http://www.fpg.unc.edu/~snapshots/snap48.pdf>

Research has shown repeatedly that poverty affects children's academic achievement. But what specifically about poverty causes these harmful effects? According to a study by FPG Child Development Institute, it is the well-being of caregivers.

Barbarin, O., Bryant, D., McCandies, T., Burchinal, M., Early, D., Clifford, R., Pianta, R., & Howes, C. (2006). Children enrolled in public pre-k: The relation of family life, neighborhood quality, and socio-economic resources to early competence. *American Journal of Orthopsychiatry*, 76(2), 265-276.



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