



# HARVARD EDUCATION LETTER

*This article is reprinted from the May/June 2009 issue of the Harvard Education Letter.*

## Developmentally Appropriate Practice in the Age of Testing

**New reports outline key principles for preK–3rd grade**

by David McKay Wilson

**A**s the push to teach literacy and math skills reaches farther into preschool and kindergarten, educators are warning that teachers need to address young students' social, emotional, and physical needs as well as their cognitive development. Among their concerns:

- Teachers in preK–3rd grade increasingly focus on a narrow range of literacy and math skills, with studies showing some kindergarteners spend up to six times as much time on those topics and on testing and test prep than they do in free play or “choice time.”
- Many schools have eliminated recess or physical education, depriving children of their need to move and develop their bodies.
- Instruction is often focused on “scripted” curricula, giving teachers little opportunity to create lessons in response to students' interests.
- Some state standards for literacy are too stiff, such as one state's standard that all students be able to read by the beginning of first grade.

In light of these concerns, several prominent early childhood organizations have issued reports on the importance of incorporating developmentally appropriate practice into elementary school classrooms, based on what research has confirmed about early learning.

The National Association for the Education of Young Children (NAEYC) is so concerned about the pressure to prepare students for third-grade standardized tests that it adopted a position statement in early 2009 on developmentally appropriate practice for educators in preK through third grade. In their report, “Developmentally Appropriate Practice in Early Child-

hood Programs: Serving Children from Birth Through Age 8,” NAEYC researchers outlined 12 principles of child development that can be incorporated into classroom teaching (see “NAEYC's 12 Principles of Child Development”).

The report urges educators to incorporate play into daily instruction, devise classroom tasks that are challenging yet attainable, and become attuned to the needs of each student so that materials can be adapted to a child's individual needs. It also urges educators in preK through third grade to learn from each other: While preschool educators can benefit from understanding the standards children are expected to meet by third grade, NAEYC believes primary-grade teachers can improve the quality of their instruction by learning more about children's developmental needs from early childhood educators.

The Alliance for Childhood's report, “Crisis in Kindergarten: Why Children Need to Play in School,” cites nine new studies that focus on the role of play, child-initiated learning, highly structured curricula, and standardized testing. One study found that the preponderance of time in 254 New York City and Los Angeles kindergartens was spent on literacy and math. Teachers reported that the curricula didn't have room for dramatic play, blocks, or artistic activities, and that school administrators didn't value such activities. A report from the American Academy of Pediatrics, however, concluded that play was essential for healthy brain development. And a cross-national study of 1,500 young children in 10 countries found that children's language at age seven improved when teachers let them choose their activities rather than teaching them in didactic lessons.

This article is part of an ongoing series on the education of children from preK–3rd grade, made possible through the support of the Foundation for Child Development. For further information, visit the *Harvard Education Letter* online resource “Focus on Early Childhood Education” at [www.hel-earlyed.org](http://www.hel-earlyed.org).

## For Further Information



R.M. Barros, E.J. Silver, and R.E.K. Stein. "School Recess and Group Classroom Behavior." *Pediatrics* 123, no. 2 (2009): 431-436.

J.D. Bransford, A.L. Brown, and R.R. Cocking. *How People Learn: Brain, Mind, Experience, and School*. Washington, DC: National Academy Press, 2000.

K.L. Maxwell, S. Ritchie, S. Bredekamp, and T. Zimmerman. *Issues in PreK-3rd Education: Using Developmental Science to Transform Children's Early School Experiences (#4)*. Chapel Hill: University of North Carolina, FPG Child Development Institute, FirstSchool, 2009. Available online at [www.fpg.unc.edu](http://www.fpg.unc.edu)

E. Miller and J. Almon. "Crisis in Kindergarten: Why Children Need to Play in School." College Park, MD: Alliance for Childhood, 2009. Available online at [www.allianceforchildhood.org](http://www.allianceforchildhood.org)

National Association for the Education of Young Children, [www.naeyc.org](http://www.naeyc.org) Teaching Strategies, [www.teachingstrategies.com/index.cfm](http://www.teachingstrategies.com/index.cfm)

"The studies showed that teachers were spending two to three hours a day hammering in their lessons, with little time for play," says Joan Almon, executive director of the Alliance for Childhood. "The brain is eager to learn at this age, but the kids are more eager to learn from things they can touch and feel."

Charging that "developmental psychology and education have grown apart," the FPG Child Development Institute in Chapel Hill, N.C., is also advocating for more professional development and coursework for teachers in the science of child development. The institute's researchers emphasize the importance of four foundations of learning: self-regulation, representation, memory, and attachment (see "Four Foundations of Learning").

"The ability to focus, pay attention, and work with others is very predictive of long-term success in school," says Carol Copple, coeditor of the NAEYC report. "Those things are typically emphasized in preschool, but they are important for older children as well."

### Responsiveness and Engagement

Developmentally appropriate practice is based on the recognition that child development generally occurs in a predictable sequence of stages. While children may develop at different rates, each stage of development lays the groundwork for the acquisition of new skills and abilities in the next phase. Research has long indicated that children do best when they are supported to achieve goals just beyond their current level of mastery.

In crafting their report, NAEYC researchers reviewed recent educational research, interviewed scores of experts, and observed classrooms. They note the crucial connection between children's social and emotional life and their academic competence. Children make the biggest strides, the authors found, when they are able to cement secure, consistent relationships with responsive adults.

For classroom teachers, they say, being responsive means being able to adapt the curriculum to address their students' needs and interests and to allow children to discuss their experiences, feelings, and ideas. That can be difficult when teachers are following the highly regimented lesson plans now mandated in many classrooms.

Developing an enthusiasm for learning is especially important in the primary grades. Even students who have excelled in preK or kindergarten can find first or second grade so trying that they turn off to learning. Such disengagement has become so widespread that Sharon Ritchie, a senior scientist at FPG Child Development Institute, has worked with educators on a dropout-prevention project that focuses on children in preK through third grade.

"You can walk into a classroom and see kids who by third grade are done with school," she says. "They are angry and feel school is not a fair place or a place that sees them as the individual that they are."

Some of that disengagement, Ritchie says, is rooted in the way students in second or third grade are taught. She found that students in preK classes spent 136 minutes a day involved in hands-on projects. That dropped to 16

minutes by kindergarten and 12 minutes a day by second and third grade.

She encourages teachers to use hands-on activities in kindergarten and the early primary grades to allow students to experience learning through inquiry. In a first-grade lesson on evaporation, for instance, Ritchie suggests that the teacher ask the children to describe where they think rain comes from and have them draw pictures depicting their theories. Based on that information, the children can discuss their hypotheses and begin to investigate what actually happens. For example, they might observe an ice cube at room temperature as it melts and then evaporates. Older children could deepen their inquiry through library research or designing and performing their own experiments.

Teachers also need to listen to what interests their young students. Patricia Lambert, principal of the Barnard Early Childhood Center in New Rochelle, N.Y., says listening to students can spark engaging lessons. At her school, which serves children from preK through second grade, teachers are encouraged to weave district-mandated outcomes into lessons that teach but do not drill. "Our goal by the end of kindergarten is to have children count from zero to 20," she says. If the children are learning about sharks, she adds, "we may use a model of a shark, and count the shark's teeth."

### NAEYC's 12 Principles of Child Development

- All domains of development and learning—physical, social and emotional, and cognitive—are related.
- Children follow well-documented sequences to build knowledge.
- Children develop and learn at varying rates.
- Learning develops from the dynamic interaction of biological maturation and experience.
- Early childhood experiences can have profound effects, and optimal periods exist for certain types of development and learning.
- Development proceeds toward greater complexity and self-regulation.
- Children thrive with secure, consistent relationships with responsive adults.
- Multiple social and cultural contexts influence learning and development.
- Children learn in a variety of ways, so teachers need a range of strategies.
- Play helps develop self-regulation, language, cognition, and social competence.
- Children advance when challenged just beyond their current level of mastery.
- Children's experiences shape their motivation, which in turn affects their learning.

"I'm all for exposing preschool children to numbers and letters," Lambert says, "but we introduce by listening to what the children are interested in and then gently imposing these concepts on their interests."

### Learning through Play

Young children do much of their learning through play, says Robert Pianta, dean of the Curry School of Education at the University of Virginia, but adults need to guide their play to help them learn. "It's a misinterpretation to think that letting students loose for extended periods of time is going to automatically yield learning gains," he says. "This is particularly true for students struggling to self-regulate and communicate."

Teachers must intentionally engage with their students, shaping play in a way that's enjoyable, while providing the child with the information and skills to allow playful exploration to produce learning. With blocks, for example, a teacher can talk about shapes, sizes, and colors to help the student bring those concepts to life.

That intentional engagement, says Sharon Kagan, the Marx Professor of Early Childhood and Family Policy at Columbia's Teachers College, should be subtle and keyed to a child's particular needs. If a boy is having trouble using scissors, then scissors, paste, and other art supplies should be set up for him at a table. "The teacher shouldn't push the child to the table, but needs to provide encouragement," she says. "Then the teacher can watch and monitor and guide."

Other advocates, however, note that some of the richest learning for children comes through child-initiated or child-directed play. The Alliance for Childhood report recommends at least three daily play periods of an hour or longer in a full-day, six-hour kindergarten program, with at least one hour spent playing outdoors.

### Let's Get Physical

At a time when some schools are cutting recess and physical education classes in favor of academic instruction, researchers say these districts are depriving children of essential school-based activities that prepare them for learning. The NAEYC report, for example, recommends that children play outside every day, have regular physical education classes, and have ample opportunities to use their large muscles for balancing, running, jumping, and other vigorous activities.

A recent study in *Pediatrics* detailed the benefits of recess for third-graders. Dr. Romina Barros, pediatrician at Albert Einstein College of Medicine in New York City, surveyed about 11,000 eight-year-olds and found that 30 percent had little or no recess. Those who had at least 15 minutes of recess exhibited better classroom behavior than those who didn't have a break.

The study shows that giving children a break from their studies helps them with self-regulation, a key predictor of

## Four Foundations of Learning

Teachers of children from preK to age eight should focus as much on self-regulation, representational thought, memory, and attachment as they do on basic skills, say researchers at the University of North Carolina's School of Education.

These four issues serve as the foundation for young children's development, according to Sharon Ritchie, a senior scientist at FPG Child Development Institute and coauthor of the report, "Using Developmental Science to Transform Children's Early School Experiences." She offers the following examples:

- *Self-regulation* is often developed through play. For example, when kindergartners play "restaurant," they must regulate their behavior to stay in the role of customer, waiter, cashier, or store manager. As children grow older, their play follows more complex rules, as when third-graders act out a story they have read.
- Secure *attachment* relationships help young children feel comfortable exploring the world to learn. Teachers can nurture good relationships by helping students express their feelings and resolve conflicts.
- *Representational thought* is the ability to use an expression—be it a word, gesture, or drawing—to depict an idea. Teachers need to help children find ways to express their own ideas before guiding them to new understanding.
- *Memory* is a crucial part of learning. Strategies to help strengthen students' memory include encouraging students to talk about what they have just learned or, as they grow older, reflecting on what they do when they need to remember something. Teachers can also structure their classes to help children remember the most important items taught that day.

long-term success in school. On the playground, children learn how to resolve conflicts, control their actions in a game, and take turns. They also get to use some of that natural energy that spills out of some children in the classroom and can be seen as disruptive.

"You can't move forward with another half-hour of math if you see the kids are bouncing out of their skins," says Alice Keane, a first-grade teacher at Lake Bluff Elementary School in Shorewood, Wis. "We might take what we call a 'wiggle walk' around the school because the kids in the class have too many wiggles. It's amazing how more receptive the children are after they've moved around." ■

*David McKay Wilson is a freelance education journalist who lives in New York State.*

This material has been reprinted with permission of the *Harvard Education Letter* for personal use only. Any other use, print or electronic, will require written permission from the *Letter*. For more information, please visit [www.edletter.org](http://www.edletter.org) or call 1-617-495-3432.

Copyright © 2009 by the President and Fellows of Harvard College. All rights reserved.

The *Harvard Education Letter* is an imprint of the Harvard Education Publishing Group, publishers of the *Harvard Educational Review* and books under the imprint Harvard Education Press. HEPG's editorial offices are located at 8 Story Street, First Floor, Cambridge, MA 02138, tel. 617-495-3432, or email to [hepg@harvard.edu](mailto:hepg@harvard.edu).