



Of Primary Interest

Developing Self-Regulation in Kindergarten

Can We Keep All the Crickets in the Basket?

When asked to describe her job, a kindergarten teacher said that teaching 5-year-olds is like trying to keep crickets in a basket: when you open the lid to put in a few more crickets, the others jump out. Anyone who teaches kindergarten can relate to this description; sometimes it seems that just managing a roomful of kindergartners takes up almost all the teacher's energy, leaving little for teaching academic skills.

In today's kindergarten classrooms, where demands for academic learning are on the rise, teachers can no longer wait until their "little crickets" simply outgrow their hard-to-manage behaviors. In fact, teachers rate "difficulty following directions" as their number one concern about children, indicating that more than half of their students experience this difficulty (Rimm-Kaufman, Pianta, & Cox 2001). Teaching 5-year-olds to **regulate** their own behaviors becomes one of the major goals, adding yet another "R" to the list of basic skills children learn in kindergarten.

What is self-regulation?

Self-regulation is a deep, internal mechanism that enables children as well as adults to engage in mindful, intentional, and thoughtful behaviors. Self-regulation has two

Elena Bodrova, PhD, is a principal researcher at McREL (Mid-continent Research for Education and Learning), a nonprofit educational research and development organization in Denver, Colorado. ebodrova@mcrel.org

Deborah J. Leong, PhD, is director of the Center for Improving Early Learning—Tools of the Mind Project and professor emerita of psychology at Metropolitan State College of Denver. leongd@mscd.edu

Elena and Deborah have coauthored multiple articles and book chapters on early literacy, play, assessment, and self-regulation and the books *Basics of Assessment: A Primer for Early Childhood Educators* and *Tools of the Mind: A Vygotskian Approach to Early Childhood Education*.

naeyc® 1, 2, 3

Elena Bodrova and Deborah J. Leong

sides: first, it involves the ability to control one's impulses and to **stop** doing something, if needed—for example, a child can resist his immediate inclination to blurt out the answer when the teacher poses a question to another child. Second, self-regulation involves the capacity to **do** something (even if one doesn't want to do it) because it is needed, such as awaiting one's turn or raising one's hand. Self-regulated children can delay gratification and suppress their immediate impulses enough to think ahead to the possible consequences of their action or to consider alternative actions that would be more appropriate. While most children **know** that they are supposed to "use their words" instead of fighting, only children who have acquired a level of self-regulation are actually able to **use** them.

This ability to both inhibit one behavior and engage in a particular behavior on demand is a skill used not just in social interactions (emotional self-regulation) but in thinking (cognitive self-regulation) as well. For example, to read the word *cat* when it appears under a picture of a dog, a child must overcome the desire to pay more attention to the picture and instead focus on the word (Bialystok & Martin 2003). In fact, research shows that children's self-regulation behaviors in the early years predict their school achievement in reading and mathematics better than their IQ scores (Blair 2002; Blair & Razza 2007).

The National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) works to improve instruction, curriculum, and administration in education programs for young children and their families. Of Primary Interest is written by members of NAECS/SDE for kindergarten and primary teachers. The column appears in March, July, and November issues of *Young Children*.

How does self-regulation develop?

Emotional self-regulation and cognitive self-regulation seem to have the same neural roots; thus, as children grow older and their brains develop, they can increasingly take control of both their thinking and their feelings. Furthermore, if a neural system is repeatedly exercised, it will continue to develop, as with exercising a muscle. Conversely, if children **do not** systematically engage in self-regulatory behaviors at a young age, the corresponding brain areas may not develop to their full potential.

There is growing evidence that self-regulation can be taught in the classroom (Blair & Razza 2007; Diamond et al. 2007). Let's look at some strategies for doing so.

How can kindergarten teachers promote children's development of self-regulation?

Although children come to kindergarten with different levels of ability to self-regulate, there are four simple strategies teachers can use to help all children develop this critical ability.

- **Teach self-regulation to all children, not just those thought to have problems.** All young children benefit from practicing deliberate and purposeful behaviors, such as repeated switching from one set of rules to another or resisting the temptation to function on autopilot. For example, during a calendar activity, instead of having children recite the dates as a memorized sequence, a teacher can alert students to the fact that two numbers are out of order. This way, children have to follow the number sequence *and* monitor the order the numbers are in to be sure it is correct.

- **Create opportunities for children to practice the rules of a certain behavior and to apply those rules in new situations.** When children are constantly regulated by adults, they may appear to be self-regulated, when in fact they are "teacher regulated." To be able to internalize the rules of a certain behavior, children can practice them in three ways:

First, children can **follow the rules** that are established and monitored by somebody else (most often by an adult, and sometimes by another child). It is a typical occurrence in a classroom when a teacher, for example, tells children that they can get up and leave only after their names are called.

Second, children need to be able to **set rules** for each other and **monitor** how those rules are followed (something that happens on the playground, for example, when children set rules for taking turns when jumping rope and make sure nobody breaks those rules; violators who jump out of turn are not invited to play next time.

Finally, they need to **apply the rules to themselves**—for example, a child who wants to join some classmates

playing a game but remembers that she needs to finish the book first and stays in the listening center.

The good news is that teachers can view a healthy amount of tattling in kindergarten as evidence of children's growing self-regulation!

- **Offer children visual and tangible reminders about self-regulation.** Learning to regulate one's own behavior is in many ways similar to learning other competencies, such as literacy or numeracy. For young children, early stages of learning to read or to count involve the use of hands-on activities and manipulatives like magnetic letters or Unifix cubes. Similarly, early stages of learning self-regulation involve the use of visual and tangible reminders that support children's memory and attention. For example, kindergartners who have trouble remembering to put their name on their papers will become much more attentive when they put on "editor's eyes"—that is, a pair of eyeglasses with the lenses removed—to remind themselves to check their work before turning it in. For example, an effective way to settle or avoid a fight about turn taking is to give young children a tangible tool—such as choosing the short straw, tossing a coin, or rolling dice—to determine who goes first in playing a board game or who has the next turn on the computer.

- **Make play and games important parts of the curriculum.** Not only should play and games *not* be pushed out of the kindergarten classroom to make room for more "academic" learning, they need to be taken very seriously. Kindergartners learn self-regulation best through activities in which children—and not adults—set, negotiate, and follow the rules. These include make-believe play as well as games with rules. Further, to engage in games like the ones many kindergarten teachers use to teach math or phonics, children have to first have the ability to follow rules that are quite abstract and arbitrary. Children acquire and develop this ability during make-believe play, when they learn to follow concrete and simple rules such as not grabbing the stethoscope when pretending to be the patient. Instead of getting rid of blocks and dress-up clothes, kindergarten teachers need to primarily focus on improving the quality of make-believe play, ensuring that children have numerous opportunities to engage in acting out complex pretend scenarios—practicing self-regulation (Bodrova & Leong 2005, 2007).

Conclusion

Addressing gaps in knowledge and skills alone cannot guarantee success in learning for all children; we must also address the development of self-regulation as the underlying skill that makes learning possible. Kindergarten

classrooms present an important opportunity to influence self-regulation in young children. In fact, for many children, school becomes the first and only place where they can learn to regulate themselves. Thus, instruction in self-regulation in the early years deserves the same, if not more, attention as the instruction in academic subjects.

References

Bialystok, E., & M.M. Martin. 2003. Notation to symbol: Development of a child's understanding of print. *Journal of Experimental Child Psychology* 86: 223–43.

Blair, C. 2002. School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist* 57 (2): 111–27.

Blair, C., & R.P. Razza. 2007. Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child Development* 78 (2): 647–63.

Bodrova, E., & D.J. Leong. 2005. Self-regulation as a key to school readiness: How can early childhood teachers promote this critical competence? In *Critical issues in early childhood professional development*, eds. M. Zaslow & I. Martinez-Beck, 223–70. Baltimore: Brookes.

Bodrova, E., & D.J. Leong. 2007. *Tools of the mind: The Vygotskian approach to early childhood education*. 2nd ed. Columbus, OH: Merrill/Prentice Hall.

Diamond, A., W.S. Barnett, J. Thomas, & S. Munro. 2007. Preschool program improves cognitive control. *Science* 318 (5855): 1387–88.

Rimm-Kaufman, S., R.C. Pianta, & M. Cox. 2001. Teachers' judgments of problems in the transition to school. *Early Childhood Research Quarterly* 15: 147–66.

Copyright © 2008 by the National Association for the Education of Young Children. See Permissions and Reprints online at www.journal.naeyc.org/about/permissions.asp.

