
Why Vygotsky [Still] Matters

An Interview with Elena Bodrova and Deborah J. Leong

Elena Bodrova is cofounder and knowledge advisor at Tools of the Mind, an educational nonprofit in Colorado. In collaboration with Deborah Leong, she created the Tools of the Mind early childhood curriculum and professional development program for teachers based on the theories of learning of Lev S. Vygotsky and his disciples. Her engagement with Vygotsky's work began at the Russian Institute for Preschool Education and continued in the United States at the Metropolitan State University of Denver, where she was a visiting professor, and at Mid-continent Research for Education and Learning, where she served as a principal researcher. She has authored many articles and book chapters about early literacy, assessment, play, and self-regulation. Deborah J. Leong is cofounder and president of Tools of the Mind and professor emerita of developmental and educational psychology at Metropolitan State University. She has coauthored numerous articles, books, and videos about play, the Vygotskian approach to education, self-regulation and executive functions developments in preschool and kindergarten, and assessment and measurement in the early childhood classroom. **Key words:** child development; cultural-historical approach; early childhood education; Lev S. Vygotsky; make-believe play; zone of proximal development

American Journal of Play: Tell us about where you grew up and how you played as children.

Elena Bodrova: I grew up in Russia (at the time, it was the Soviet Union). Until the age of thirteen, I lived with my parents in St. Petersburg (then Leningrad), spending summers in Moscow with my grandparents. Our family moved to Moscow when I was thirteen. I remember playing with other children outside (jumping rope, and all kinds of movement games). We were all latchkey kids and spent hours playing after school until dark when it was time to go home and do our homework. During summer, we played fairly elaborate scenarios involving building and attacking fortresses,

treasure hunting, and such. We made our own play props or used minimal props (like cardboard dolls) to make them different outfits that went with the scenarios we were enacting.

Deborah J. Leong: I grew up in rural California and lived in vineyards because my father ran several wineries. I remember playing elaborate stories from books I had read with my two younger sisters and other children who lived at the winery. We didn't have any TV. We also played tag and all kinds of physical games at school. In fifth grade, we moved into town, and I played with children in the neighborhood for the first time. Like Elena, we would stay out all day in the summer until it was dark. When I was eleven, we moved to Barquisimeto, Venezuela, for a year. I remember the joy of finding out that my new friends enjoyed the same things that I did and that we played together the same way. It was glorious.

AJP: How have these early play experiences influenced your approach to studying early childhood and play?

EB: I remember that, oftentimes, I was the oldest kid in our gang, so I ended up directing my younger playmates. Probably, it is why I was always drawn to young children and why I chose my career as a researcher of child psychology.

DL: I remember the immense joy and pleasure of playing with my friends and my sisters and how it involved much discussion and preparation before we actually played what we planned to play. Playing together made hours pass in what felt like a second, and I remember being very happy and laughing a lot. I also remember playing stories and changing the outcomes by changing the way the characters acted and felt. I remember negotiating what we would play. When we were playing games like tag, I remember discussing the rules and how to make them fair. My experience playing made the ideas about what children learn in play—the depth of development that occurs there—really resonated with me. It had a profound effect on my views of how learning happens in early childhood.

AJP: Who was Lev S. Vygotsky?

EB and DL: Lev Vygotsky was a psychologist and educator working in the 1920s and 1930s postrevolutionary Russia. He can be considered a true Renaissance man for contributing to many areas of scholarship, including literary criticism, special education, theoretical and applied psychology, neuropsychology, and linguistics. He lived a short but productive life, laying the foundation for the work of several generations of his students and followers.

Shortly after his death in 1934, Vygotsky's writing was suppressed by the Soviet regime for deviating from the official party line, eventually to be rediscovered in the late 1950s to early 1960s.

To paraphrase what we wrote for the 2007 *Early Childhood Education: An International Encyclopedia*, Vygotsky was born in 1896 in a part of the Russian empire that is now the Republic of Belarus. He is often called the “Mozart of Psychology” because, like the famous composer, he applied his early genius to many different disciplines. And, like Mozart, he died young—in Vygotsky's case of tuberculosis at the age of thirty-seven. Vygotsky had to overcome many obstacles during his remarkable life. To attend Moscow University as a Jew, he had to win a special lottery despite having graduated high school with honors. Only specific careers would allow him to live outside the Pale, and he pursued a degree in medicine, switching to law during his freshman year. Even attending law classes, however, Vygotsky also studied the humanities, simultaneously enrolling in Shanyavsky University for classes in philosophy, literature, and linguistics.

Vygotsky graduated from both universities and returned to his native Gomel, where he taught literature, language, and psychology to school-children, night school students, and teachers in preservice and in-service programs. During this period, Vygotsky developed many of the innovative ideas that later formed his cultural-historical approach, and in 1924 he presented some of them at the All-Russian Congress on the Study of Behavior in St. Petersburg. Although he was an unknown instructor from a small provincial city, his presentation made such an impression that he was offered a prestigious research position at the Moscow Psychological Institute.

Vygotsky then moved to Moscow in 1924 hoping to promote a new theory for understanding and solving the social and educational problems of his time. In addition to this theoretical work, Vygotsky pioneered new practical applications of his ideas. One of these he called “defectology,” a discipline that combined child abnormal psychology and special education. In fact, he became the head of an experimental laboratory later known as the Institute of Defectology. There, he advocated a new approach to educating children with special needs focused on giving them particular cultural tools to help them integrate fully into society. Vygotsky immersed himself in research, writing, and teaching in child development, educational and clinical psychology, special education, and the psychology of art, expanding

the circle of his colleagues and students into what later became the Vygotsky School. He did not, however, completely realize his hopes to create a new theory during his lifetime nor were they realized during the lifetimes of most of his closest colleagues and students.

When the academic openness of the early years of the Bolshevik revolution ended, the USSR's communist government suppressed Vygotsky's ideas and the educational practices he initiated. These ideas and practices reemerged in the 1960s and 1970s, kept alive by Vygotsky's students, who managed to preserve his scientific legacy, enriching the Vygotskian approach to education and broadening its practical applications.

AJP: What were some of his key views on child development?

EB and DL: According to Vygotsky—as we suggested in our 2005 “High Quality Preschool Programs: What Would Vygotsky Say?”—the history of human development is a complex interplay between the processes of natural development, determined biologically, and the processes of cultural development, brought about by the interaction of a growing individual with others. Thus, the issue is not one of nature or nurture but of how nature and nurture work in concert. What happens as a result of these interactions amounts to more than the simple acquisition of values, expectations, or competencies promoted by a specific culture. Instead, the entire system of naturally determined mental functions gets restructured to produce what Vygotsky called higher mental functions.

When we discuss Vygotsky's views on child development in early years it is important to specify the meaning of the term “preschool” in his writings. In Vygotsky's day, children started formal schooling at seven or eight, so preschool covers what we now call kindergarten and first grade. During this preschool period, in which the restructuring we just mentioned goes through its initial stages, the use of cultural tools transforms children's perceptions and begins to transform some of their other cognitive processes like attention, memory, and thinking. In addition to cognitive processes, social and emotional capacities are similarly transformed. As these cognitive, social, and emotional capacities develop, preschool children make the transition from being “slaves to their environment” to becoming “masters of their own behavior.” Their behavior develops through self-regulatory, private speech and through their participation in make-believe play, both of which pave the way for higher mental functions.

Vygotsky's idea of children becoming more intentional in regulating

their behavior as they learn to use the “tools of the mind” of the culture in which they are brought up resonates with current views about self-regulation and executive functions being critical to children’s cognitive, social, and emotional development. Moreover, working jointly with his colleague and thought partner Alexander Luria, Vygotsky laid the foundation for a developmental neuropsychology that predates current theories of executive functioning by many decades.

AJP: Take us back to the early twentieth century. What were some of the views of other developmental theorists that Vygotsky was responding to?

EB and DL: Let’s read a quote from our 2024 *Tools of the Mind: The Vygotskian Approach to Early Childhood Education*: “Among the major Western theorists that Vygotsky studied and reacted to were psychologists such as Piaget (constructivism), Watson and Skinner (behaviorism), Freud (psychoanalysis), Koehler and Koffka (Gestalt psychology), as well as educators, anthropologists, and linguists. In his theoretical papers and empirical studies, Vygotsky proposed alternative explanations for several of Piaget’s early works concerning the development of language in young children. Vygotsky frequently referred to Koehler’s work on the use of tools by apes to discuss various similarities and differences in animal and human behavior.”

Vygotsky also commented on the work of educator Maria Montessori (specifically, on her methods of teaching writing to young children), arguing that the activity children were engaging in in Montessori preschools was calligraphy and not writing per se.

AJP: How did you first discover Vygotsky’s work? How has his research and writings influenced your own work?

EB: I was fortunate to study with several of Vygotsky’s direct colleagues and students as a student at Moscow State University. The class on General Psychology was taught by Alexei Leont’ev; the class on Neuropsychology was taught by Alexander Luria; and the classes on Child Psychology were taught by Daniil Elkonin and Piotr Galperin. Later, the advisors for my undergraduate papers and later my master’s thesis and PhD dissertation were second-generation Vygotsky scholars, and after that, my older colleagues in the Russian Institute for Preschool Education were third-generation Vygotskians. So, it can be said that all my formative years as a student and as a researcher were shaped by Vygotsky’s work and the work of his students.

DL: At Harvard in the 1980s, I studied with Courtney Cazden, who was an early Vygotsky scholar, and she introduced me to the concept of the zone

of proximal development (or ZPD), which Vygotsky defined as “a distance between the actual developmental level determined by individual problem solving and the level of development as determined through problem solving under guidance or in collaboration with more capable peers.” That really resonated with me. The idea that there was an individual window of opportunity for learning—and that we could provide teaching that matched that window—was really an exciting idea. However, I have to say I learned to operationalize this idea—to identify the tactics teachers could use to support the ZPD—by working with Elena in the classroom. Elena brought a depth of understanding about how actually to teach what we used to adapt typical early childhood activities so they responded to the ZPD in a way teachers could actually implement. I hope our work has helped teachers use the wonderful ideas that Vygotsky and his students developed.

AJP: Why are Vygotsky’s writings on play important for us to consider and reconsider a century later?

EB and DL: We could list several reasons for the importance and timeliness of Vygotsky’s writings on play. One of the most pragmatic involves the virtual disappearance of make-believe play from the culture of childhood (and from the early childhood classrooms as well) and a possible link between this disappearance and the alarming rise of mental health problems in children and young adults, as Peter Gray discussed in his important 2023 article in the *Journal of Pediatrics* about the decline in independent activity.

Another one concerns the apparent disconnect between the disappearance of child-directed, make-believe play and society’s emphasis on so-called twenty-first-century skills, all of which require personal agency.

There is also a philosophical reason—Vygotsky and his students (mainly Daniil Elkonin) view early childhood, along with its uniquely childhood activities such as make-believe play, not merely as the time when children are “getting ready” but as one having its own value independent from other activities society deems beneficial. It is in play that children develop general underlying competencies affecting their ability to acquire the multiple tools of the mind provided by their culture well beyond their primary school years. The shortsighted emphasis on school readiness prevalent in Western education systems ignores the inherent value of early childhood, which results in poor outcomes across many areas of child development and learning including—ironically—school adjustment and academic achievement.

AJP: Why is make-believe play so important in early childhood classrooms?

EB and DL: Compared to all other activities (including all other kinds of play such as construction play and movement games), make-believe play provides the most benefits to child development. In Vygotsky's words, "In play, a child is always above his average age, above his daily behavior; in play, it is as though he were a head taller than himself." This "head taller" applies to multiple emergent skills and competencies and, above all, to a child's developing ability to self-regulate, which is the ability Vygotsky considered the main developmental accomplishment of early childhood and a necessary prerequisite to a child's success in school and beyond.

To translate Vygotsky's words into today's language, reintroducing mature, make-believe play in early childhood classrooms may assist in solving the dilemma of the long-term benefits of high-quality prekindergarten experiences in the face of an apparent PreK fadeout (based on the measures of so-called "constrained" skills). Researchers have been long puzzled by the fact that the advantages in cognitive and academic skills for the children attending PreK appear to be short-lived and tend to fade away after several years of formal schooling. This fading seems to contradict the findings of several longitudinal studies demonstrating long-term and (as in Heckman's recent studies) even intergenerational effects of PreK on a variety of real-life outcomes. One of the possible explanations for this puzzle that has been suggested recently by some scholars holds that short-term outcomes of PreK get measured on "constrained" skills (i.e., the directly teachable skills that can be readily assessed). On the other hand, skills such as self-regulation—which might be responsible for children's success in school and in life past primary grades—belong to the category of "unconstrained," and they are more difficult to assess and to teach directly. Promoting mature, make-believe play in early childhood classrooms may be a promising strategy to help children build their unconstrained skills.

AJP: What is the Tools of the Mind childhood curriculum?

EB and DL: As we wrote in 2019 in the *Journal of Cognitive Education and Psychology*, Tools of the Mind (often shortened to Tools) is an early childhood instructional program based on the principles of cultural-historical psychology. Although the American educational system had seen Vygotskian-based curricula for older students, most previous attempts to use such pedagogy with younger children had been limited to individual instructional strategies, such as using "Elkonin boxes" to teach phonemic awareness or using measurement to introduce the concept of number. In

contrast, promoting isolated areas of child development, Tools applies a cultural-historical approach consistently throughout an entire curriculum—from using specific activities and materials to organizing students’ daily classroom experiences to the using dynamic assessment for monitoring student progress.

Tools emphasizes the development of children’s self-regulation, which Vygotskian scholars often call intentionality or deliberateness. In any case, it refers to a mental facility necessary for the development of higher mental functions, and it constitutes a critical prerequisite for success in school. In addition to Vygotskian educational philosophy, the Tools program approach to promoting self-regulation is also informed by Alexander Luria’s work on the genesis of voluntary actions and by more recent developments in cognitive neuropsychology, particularly concerning self-regulation and executive functions.

In Tools classrooms, we give children multiple opportunities to practice self-regulation in specific (or “focal”) activities and in the activities that embed self-regulation strategies in academic tasks. At the heart of the Tools curriculum lie instructional strategies that promote mature, make-believe play because Vygotskians consider such play the leading activity for both preschool and kindergarten-aged children and dub it “the school for deliberateness.”

Unlike those small-scale, Vygotsky-based interventions mostly delivered by researchers, we designed Tools from its inception as a comprehensive curriculum for regular classroom teachers in early childhood classrooms. First developed and pilot tested in Denver, Colorado, in the 1990s, Tools has expanded to many other states and has been implemented in a variety of early childhood settings, including public and private preschools and Head Start programs, as well as half-day and full-day kindergarten classrooms. Outside the United States, Tools has been used in Canada and Chile.

Developing a Vygotskian-based early childhood curriculum in the context of the American educational system presented us with a set of challenges. Some of them, like dealing with different educational philosophies and classroom practices, we expected. Others we had to face as they emerged. One involved the tendency to “push down” content and pedagogy initially designed for older children to kindergartners and even preschoolers. We had to maintain a fine balance between the ever-growing demands of state and national academic standards and helping young children

develop those cognitive and social and emotional competencies cultural-historical scholars consider developmental accomplishments unique to preschool and kindergarten age. For Tools, this meant we could adapt none of the materials or activities simply from the curricula designed by post-Vygotskian educators in Russia or in Europe. Instead, we had to build them from the ground up in response to the specific demands of American early childhood classrooms. It also meant that to ensure successful implementation of the curriculum across the United States, we had to align Tools with preschool and kindergarten learning standards and assessments in different states and multiple school districts and programs. Finally, although many of the Vygotskian-based instructional practices had been developed in the context of the fairly uniform state-run Soviet preschools, early childhood education settings in the United States vary greatly in the quality of classroom, in the time children spend in the classroom, and in the professional background of the teachers. Making Tools work in such diverse settings and for different children added to the complexity of our endeavor.

AJP: How did you develop Tools of the Mind?

EB and DL: We were interested in the educational applications of the Vygotskian approach, and we started with distilling the main principles of Vygotskian-based pedagogy based on the work of several generations of his students. We soon realized that there is no way we could simply translate and adapt the work of Russian educators, no matter how impressive their results. Moreover, to try to do so would be inconsistent with the very premises of the Vygotskian paradigm. This led to our attempts to design instructional strategies consistent with the Vygotskian approach but at the same time, fit for the social situations of American preschoolers and kindergartners at the end of the twentieth century.

The first teachers' concern we addressed involved children's low self-regulation and the absence of effective strategies promoting self-regulation. For Vygotsky, mastery of one's own behavior is one of the developmental accomplishments of early childhood, so we thought that using Vygotskian-based strategies could help children develop self-regulation. However, having observed teaching practices in many programs, we realized that they often do not support and sometimes even defeat efforts to improve children's self-regulation. So, we had no choice but to develop an entire curriculum with all of its activities infused with self-regulation components. We wanted to use Vygotskian principles of teaching and learning to close

the achievement gap for all children, especially for low-income, minority students and dual-language learners

This evolved into a curriculum and a professional development program to empower teachers with the understanding and tools they need to create positive classroom cultures, facilitate intentional, playful learning, and support the development of self-regulated learners who achieve their full potential. Because we also were researchers at heart, we engaged many small-scale and large-scale research projects, both to improve a specific activity's impact on learning and to improve the effectiveness of the curriculum and the program's implementation. We used the results to improve and refine our approach, and the latest studies show the positive impact of our efforts.

AJP: What are the goals of the curriculum?

EB and DL: The main goal of the curriculum is to promote the skills and competencies of children that Vygotskians consider the main developmental accomplishments of early childhood—self-regulation, symbolic thinking, imagination, and the like. At the same time, the curriculum aims to equip children with the tools of the mind consistent with current social and cultural expectations. In today's American preschools and kindergartens, these tools include literacy and numeracy.

Tools is more than a curriculum, it is equally a professional development program designed to empower teachers with the skills to create positive classroom cultures that have intellectual equity, in which children form a community of learners who support each other and teachers meet each child's ZPD through intentional, playful learning.

AJP: How has the Tools of the Mind curriculum changed over time? How have you responded to new studies and feedback?

EB and DL: Some things that did not change include our adherence to the Vygotskian educational philosophy and our desire to keep the curriculum consistent with this approach. When we had to add or modify an activity to comply with the changes in state standards, we always made sure that we did not compromise the integrity of the Vygotskian approach.

Most of the changes we made were not associated with the content or pedagogy but with the implementation of the curriculum. Multiple evaluation studies helped us detect the barriers to high-quality implementation and to make necessary changes and adjustments. For example, our materials are now more teacher friendly, and our professional development is

better suited for the diverse early childhood education work force.

One change has been an expansion in our scale and reach. Tools of the Mind began in one school district with fifteen teachers in 1996. Now, we reach forty thousand children a year in twenty-three states. Nine out of ten programs we serve continue to use it for many years after they are trained. We are more sophisticated about measuring the effectiveness of our approach, engaging in continuous improvement with the use of technology to support teachers. Data share partnerships allow us to monitor and evaluate our professional development and our materials. Professional development workshops and professional learning communities for teachers have arisen. Our implementation gets steadily better. We serve families more effectively and leverage technology more efficiently. And a growing body of research supports our approach.

AJP: You have suggested in your scholarship that describing the social-cultural, social-constructivist, or social-learning approach as the same as the Vygotskian approach can be misleading. How so?

EB and DL: As we discussed in our chapter in the 2020 *Scientific Influences on Early Childhood Education* (and in the third edition of *Tools of the Mind*), describing the Vygotskian approach as sociocultural, social-constructivist, and even (and quite confusingly so) as social learning underscores one of the major distinguishing features of Vygotsky's work: its emphasis on the role of social interactions in the processes of children's learning and development. Although these terms are useful when we wish to contrast Vygotskian theory with the nativist theories of development or the behaviorist theories of learning, their use can sometimes lead to the misunderstanding or oversimplification of key Vygotskian ideas.

Vygotsky and his close colleagues used a different term—cultural-historical—to describe their approach, and this term is now used by scholars who trace their philosophical lineage to Vygotsky's students or to the students of Vygotsky's students. To better understand Vygotskian views on child development and education, it is important to unpack the concept of the cultural-historical approach and to have a more nuanced understanding of its meaning.

Omitting the "history" from a description of the Vygotskian approach undermines its developmental focus. This focus seems especially relevant when we apply Vygotskian theory to early childhood education because the same social interactions and culturally specific factors might play a

different role depending on a child's individual history of development and on when and why these interactions and factors appeared in the history of humankind.

In the cultural-historical approach, Vygotsky used the term culture in two major ways—in the discussion of specific sociocultural environments that shape children's learning and development and also in the study of cultural tools such as signs and symbols and their role in human development. It seems that the first aspect of culture received much more attention in the work of post-Vygotskians in the West, but in-depth studies of children's appropriation of specific cultural tools and of the resulting changes in their psychological processes remained relatively rare. At the same time, it is this part of Vygotsky's legacy that makes it relevant for solving today's challenges of education in general and especially for early childhood education.

The term history in this approach is also used in a very specific context. Vygotsky proposed that, to understand psychological processes, one needs to study these processes as they change and develop, hence his focus on history. Vygotsky argued that fully developed psychological processes are hard to study because they usually exist in an internalized and "folded" form in which many of the component processes are not easily accessible. Therefore, the methodology commonly employed by developmental psychologists—such as longitudinal or cross-sectional design—can only describe an outcome, not the process itself. At the same time, a process undergoing development still has an extensive external component accessible to observation, which may provide researchers with an insight into the nature of this particular process. The word historical in the cultural-historical approach applies to the study of the development of psychological processes as they unfold both through an individual person's history (or ontogeny) and the history of humankind (or phylogeny). The latter explains Vygotsky's special interest in the development of children at an age when these processes are still taking shape.

In addition to understanding the terms Vygotskians use to describe their approach, it is important to comment on one specific term: social constructivism. When applied to the Vygotskian approach, this term means that children play an active role in constructing their knowledge—a view we can contrast with the behaviorist approaches—and that children's acquisition of knowledge is always mediated by their social interactions with others (a view we can contrast with theories that consider children's con-

struction of knowledge an individual endeavor). In current educational literature, social constructivism seems to have acquired different meanings, some of them opposed to the beliefs of Vygotskians. Sometimes, this confusion of different meanings for the same term leads to unjustified criticisms of the Vygotskian approach.

AJP: One last question: If Vygotsky were alive today, what key principles from the cultural-historical education philosophy would he espouse to twenty-first century early childhood educators?

EB and DL: There are several principles that we think are most important. We can list the ones that can be directly applied to learning and teaching. However, they cannot be viewed in isolation from more general principles such as internalization—which suggests that each higher mental function starts as intermental and later becomes internalized as intramental—and mediation, which suggests that human mental functioning involves the use of tools of the mind developed in the culture and transmitted via formal and informal education.

The principles more directly associated with education include that teaching and learning can lead to child development. Strategically selected and properly taught, tools of the mind does not simply expand children's repertoire of knowledge and skills but actually propel children to the next level of development.

And these key principles include of course the Zone of Proximal Development. Knowing each child's ZPD allows teachers to plan the most effective teaching that is most likely to promote a child's development. Most assessments currently used in education capture only children's actual development as they focus on the skills fully developed at the time of testing. These assessments do not capture the skills still under development and the skills that can emerge when we provide proper assistance. Ignoring children's ZPD makes assessments less accurate and makes it harder to use the assessment results to plan instruction.